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# Revision of the World species of the genus *Chromoteleia* Ashmead (Hymenoptera, Platygastridae, Scelioninae)

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## Abstract

The genus *Chromoteleia* Ashmead is revised. Twenty-seven species are recognized, of which six species are redescribed: *C. congoana* (Risbec), *C. connectens* Kieffer, *C. fuscicornis* Kieffer, *C. longitarsis* Kieffer, *C. semicyanea* Ashmead, *C. tricarinata* Kieffer; and twenty-one species are described as new: *C. aequalis* Chen & Johnson, **sp. n.**, *C. alternata* Chen & Johnson, **sp. n.**, *C. bidens* Chen & Masner, **sp. n.**, *C. copiosa* Chen & Johnson, **sp. n.**, *C. cuneus* Chen & Johnson, **sp. n.**, *C. curta* Chen & Johnson, **sp. n.**, *C. depilis* Chen & Johnson, **sp. n.**, *C. dispar* Chen & Masner, **sp. n.**, *C. feng* Chen & Johnson, **sp. n.**, *C. fossa* Chen & Johnson, **sp. n.**, *C. ingens* Chen & Masner, **sp. n.**, *C. levitas* Chen & Johnson, **sp. n.**, *C. longa* Chen & Johnson, **sp. n.**, *C. maura* Chen & Masner, **sp. n.**, *C. parvitas* Chen & Johnson, **sp. n.,** *C. pilus* Chen & Johnson, **sp. n.**, *C. plana* Chen & Johnson, **sp. n.**, *C. rara* Chen & Johnson, **sp. n.**, *C. robusta* Chen & Johnson, **sp. n.**, *C. semilutea* Chen & Johnson, **sp. n.**, *C. sparsa* Chen & Johnson, **sp. n.** *Chromoteleia rufithorax* Kieffer remains a valid species, but its identity and status are unclear. All species are known only from the Neotropical region except for *Chromoteleia congoana* (Resbec) which only occurs in Africa.

## Keywords

identification key, Platygastroidea, species descriptions

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## Introduction

The genus *Chromoteleia* was originally described by Ashmead (1893) based on the colorful type species *Chromoteleia semicyanea* Ashmead collected in Saint Vincent. Later, Kieffer (1926) proposed *Petalosema* for species with expanded metanotum (metascutellum). Masner (1976) synonymized *Petalosema* with *Chromoteleia* by pointing out that Kieffer (1926) was misled by Ashmead's (1893) inaccurate illustration of *C. semicyanea* showing a narrow and unexpanded metanotum. Six species were recorded from the New World: *C. connectens* Kieffer, *C. fuscicornis* Kieffer, *C. longitarsis* Kieffer, *C. rufithorax* Kieffer, *C. semicyanea* Ashmead, and *C. tricarinata* Kieffer. One species also was described from the Afrotropical region, *C. congoana* (Risbec), from what is currently Gabon. One fossil species, *C. theobaldi* Maneval, is reported from Baltic amber (from 40~60 mya) (Maneval 1938), but the status of this species is not clear (Talamas and Buffington 2015) and requires direct examination.

Since its original description in 1893, *Chromoteleia* has never been comprehensively reviewed. Although there are no host records for *Chromoteleia*, we suspect that it parasitizes the eggs of Orthoptera based on large size and elongate shape of the parasitoids. A number of scelionine genera of similar habitus, and presumed close relation, are also known to be parasitoids of orthopteran eggs, e.g., *Macroteleia* Kieffer (Muesebeck, 1977), *Triteleia* Kieffer (Popovici et al. 2011). The goal of this work is to produce a systematic revision of the world species of *Chromoteleia*, expand the biogeographic data associated with these species, and to present a clarified generic concept. The contributions of the authors are as follows. H.-y. Chen, E. J. Talamas, A. A. Valerio and N.F. Johnson: character definition, generic concept development, species concept development, imaging, key development, manuscript preparation; L. Masner: character definition, generic concept development, species concept development.

## Materials and methods

This work is based upon specimens in the following collections, with abbreviations used in the text:

**AEIC** American Entomological Institute, Gainesville, FL;
**AMNH** American Museum of Natural History, New York, NY;
**BPBM** Bernice P. Bishop Museum, Honolulu, HI;
**CAS** California Academy of Sciences, San Francisco, CA;
**CNCI** Canadian National Collection of Insects, Ottawa, Canada;
**CSCA** California State Collection of Arthropods, Sacramento, CA;
**FSCA** Florida State Collection of Arthropods, Gainesville, FL;
**IAVH** Instituto Alexander von Humboldt, Colección de Artrópodos, Villa de Leyva, Colombia;
**INHS** Illinois Natural History Survey, Urbana, IL;

| | |
|---|---|
| **KUNH** | Kansas University Natural History Museum, Lawrence, KS; |
| **MIZA** | Museo del Instituto de Zoología Agrícola, Maracay, Venezuela; |
| **MNHN** | Muséum National d'Histoire Naturelle, Paris, France; |
| **MPEG** | Museu Paraense Emílio Goeldi, Belém, PA, Brazil; |
| **MZLU** | Lund Museum of Zoology, Lund University, Lund, Sweden; |
| **OSUC** | C.A. Triplehorn Insect Collection, Ohio State University, Columbus, OH; |
| **SAMC** | South African Museum, Iziko Museums of Cape Town, South Africa; |
| **TAMU** | Texas A&M University Insect Collection, College Station, TX; |
| **UCDC** | R.M. Bohart Museum of Entomology, University of California, Davis, CA; |
| **UCMC** | University of Colorado, Boulder, CO; |
| **USNM** | National Museum of Natural History, Washington, DC. |

Abbreviations and morphological terms used in text:

| | |
|---|---|
| **A1, A2, ... A12** | antennomere 1, 2, … 12; |
| **claval formula** | distribution of the large, multiporous basiconic sensilla on the underside of apical antennomeres of the female, with the segment interval specified followed by the number of sensilla per segment (Bin 1981); |
| **EH** | eye height, length of compound eye measured parallel to dorsoventral midline of head; |
| **IOS** | interocular space, minimal distance on frons between compound eyes; |
| **OD** | ocellar diameter, greatest width of ocellus; |
| **OOL** | ocular ocellar line, shortest distance from inner orbit and outer margin of posterior ocellus (Masner 1980); |
| **T1, T2, ... T7** | metasomal tergite 1, 2, ... 7; |
| **S1, S2, … S7** | metasomal sternite 1, 2, … 7. |

Morphological terminology otherwise generally follows Masner (1980) and Mikó et al. (2007). Morphological terms used in this work were as in the Hymenoptera Anatomy Ontology (Yoder et al. 2010) (Appendix 1). Identifiers (URIs) in the format HAO_XXXXXXX represent concepts in the HAO and are provided to enable readers to confirm their understanding of the concepts being referenced. To find out more about a given concept, including additional images, notes, references and other metadata, use the identifier as a search term at http://glossary.hymao.org or use the identifier as a web-link.

In the Material Examined section the specimens studied are recorded in an abbreviated format, using unique identifiers (numbers prefixed with "OSUC", "CASENT", "FBA", "MNHN_EY") for the individual specimens. The label data for all specimens have been georeferenced and recorded in the Hymenoptera Online database, and de-

tails on the data associated with these specimens can be accessed at the following link, hol.osu.edu, and entering the identifier in the form (note the space between the acronym and the number). The electronic version of the paper contains hyperlinks to external resources. Insofar as possible, the external information conforms to standards developed and maintained through the organization Biodiversity Information Standards (Taxonomic Database Working Group). All new species have been prospectively registered with ZooBank (Polaszek et al. 2005, www.zoobank.org), and other taxonomic names, where appropriate, have been retrospectively registered. The external hyperlinks are cited explicitly in the endnotes so that users of the printed version of this article have access to the same resources.

Data associated with the genus *Chromoteleia* can be accessed at http://hol.osu.edu/index.html?id=464. The generic and species descriptions were generated by a database application, vSysLab (vsyslab.osu.edu), designed to facilitate the production of a taxon by character data matrices, and to integrate those data with the existing taxonomic and specimen-level database. Data may be exported in both text format and as input files for other applications. The text output for descriptions is in the format of "Character: Character state (s)". Polymorphic characters are indicated by semicolon-separated character states.

Images and measurements were made using Combine ZP and AutoMontage extended-focus software, using JVC KY-F75U digital camera, Leica Z16 APOA microscope, and 1X objective lens. Images were post-processed with Abobe Photoshop CS3 Extended. A standard set of images is provided for each species: dorsal habitus, lateral habitus, dorsal and lateral views of the head and mesosoma, and anterior view of head. The individual images are archived in Specimage (specimage.osu.edu), the image database at The Ohio State University.

## Taxonomy

### *Chromoteleia* Ashmead

http://zoobank.org/25D9A544-B778-4365-9542-1E942D25AAF9
http://bioguid.osu.edu/xbiod_concepts/464

*Chromoteleia* Ashmead, 1893: 209, 211, 219 Type: *Chromoteleia semicyanea* Ashmead, by monotypy and original designation (keyed); Ashmead 1894: 216 (keyed); Dalla Torre 1898: 501 (catalog of species); Ashmead 1900: 327 (list of species of West Indies); Ashmead 1903: 91, 93 (keyed); Kieffer 1907: 266 (key to species); Brues 1908: 26, 27, 28, 35 (diagnosis, keyed, list of species); Kieffer 1908b: 115 (keyed); Kieffer 1910a: 312 (key to species); Kieffer 1910b: 62, 68 (description, list of species, keyed); Kieffer 1913: 224 (description); Kieffer 1926: 269, 406 (description, keyed); Muesebeck and Walkley 1956: 342 (citation of type species); Masner 1976: 23, 24 (description, synonymy; key to separate *Baryconus* Forster, *Bracalba* Dodd, *Chromoteleia* Ashmead, *Oxyscelio* Kieffer); Carpenter 1992: 471 (fossil ref-

erences); Johnson 1992: 363 (cataloged, catalog of world species); Loiácono and Margaría 2002: 557 (catalog of Brazilian species).

*Petalosema* Kieffer, 1926: 267, 358. Type: *Chromoteleia rufithorax* Kieffer, by original description (keyed, key to species), designated by Muesebeck and Walkley 1956. Synonymized by Masner (1976); Muesebeck and Walkley 1956: 336 (citation of type species); De Santis 1980: 310: (catalog of species of Brazil).
http://zoobank.org/E5906ABF-3A4D-4005-BFEC-13B2AEBD6E81
http://bioguid.osu.edu/xbiod_concepts/8521

**Description.** Length 3.38–9.20 mm; body elongate, robust.

*Head*. Head shape in dorsal view: transverse. Vertex: densely punctate to punctate rugose. Hyperoccipital carina: absent. Occipital carina: present, complete or broadly interrupted medially. OOL: lateral ocellus nearly contiguous with inner orbits, OOL < 0.5 OD; lateral ocellus contiguous with inner orbit. Upper frons: convex, without frontal shelf or carina, punctate rugose. Antennal scrobe: broadly convex to concave medially with distinct depression. Submedian carina: absent. Orbital carina: absent. Inner orbits: diverging ventrally. IOS/EH: IOS distinctly less than EH. Interantennal process: short, often excavate medially. Central keel: present or absent. Antennal foramen: oriented laterally on interantennal process. Facial striae: absent. Malar sulcus: present. Malar striae: absent. Setation of compound eye: absent. Gena: broad, convex, distinctly produced behind eye. Clypeus shape: narrow, slightly convex medially, lateral corners not produced. Anterior (or ventral) margin of clypeus: pointed; straight. Labrum: not visible in anterior view. Number of mandibular teeth: 3. Arrangement of mandibular teeth: transverse. Number of maxillary palpomeres: 4. Shape of maxillary palpomeres: cylindrical. Number of labial palpomeres: 2.

*Antenna*. Number of antennomeres in female: 12. Number of antennomeres in male: 12. Insertion of radicle into A1: parallel to longitudinal axis of A1. Shape of A1: more or less cylindrical, not flattened. Length of A3 of female: distinctly longer than A2. Number of antennomeres with basiconic sensilla in female: 5; 6. Number of antennomeres with basiconic sensilla in female: 5; 6. Arrangement of sensilla on female clava: in longitudinal pairs. Number of antennomeres bearing tyloids in male antenna: 1. Shape of male flagellum: filiform.

*Mesosoma*. Posterior apex of pronotum in dorsal view: straight, bifid apically to articulate with tegula. Epomial carina: present. Anterior face of pronotum: oblique, visible dorsally, short. Lateral face of pronotum: weakly concave below position of dorsal epomial carina. Netrion: present. Netrion shape: moderately wide, open ventrally. Anterior portion of mesoscutum: vertical, flexed ventrally to meet pronotum. Mesoscutum shape: pentagonal, excavate at base of wings. Skaphion: absent. *Notauli*: present, percurrent. Parapsidal lines: absent. Antero-admedian lines: absent. Transscutal articulation: well-developed, narrow. Shape of mesoscutellum: trapezoidal, without spines. Lateral mesoscutellar spine: absent. Median mesoscutellar spine: absent. Axillular spine: absent. Surface of mesoscutellum: convex throughout. Median longitudinal furrow on mesoscutellum: absent. Metascutellum: clearly differentiated. Shape of

metascutellum: trapezoidal with broad posterior margin; elongate trapezoidal but with deeply incised apex, forming two spines laterally. Posterior margin of metascutellum: straight; concave; convex. Setation of metascutellum: present. *Metapostnotum*: fused to propodeum. Lateral propodeal projection: absent. Medial propodeal projection: absent. Mesopleural carina: present. Mesal course of acetabular carina: not separating fore coxae. Setation of subalar pit: present. Mesopleural pit: present. Posterodorsal corner of mesopleuron: rounded anteriorly.

*Legs*. Number of mesotibial spurs: 1. Number of metatibial spurs: 1. Dorsal surface of metacoxa: smooth; punctate. Shape of metacoxa: cylindrical, ecarinate. Trochantellus: indicated by transverse sulcus on femur.

*Wings*. Wing development of female: macropterous. Wing development of male: macropterous. Tubular veins in fore wing: present. Bulla of fore wing R: absent. Length of marginal vein of fore wing: punctiform, R terminating at costal margin. Origin of r-rs in fore wing: basal of point at which R meets costal margin. Basal vein (Rs+M) in fore wing: spectral; nebulous. Development of R vein in hind wing: complete.

*Metasoma*. Number of external metasomal tergites in female: 6. Number of external metasoma sternites in female: 6. Number of external metasomal tergites in male: 7. Number of external metasomal sternites in male: 7. Shape of metasoma: lanceolate. Laterotergites: present, narrow. Laterosternites: present. T1 of female: flat; medially convex as a small hump anteriorly. Relative size of metasomal segments: T2–T3 subequal in length, remaining terga shorter. Metasomal tergites with basal crenulae: T2. Sublateral carinae on tergites: present. Median longitudinal carina on metasomal terga: absent. Shape of female T6: flattened; laterally compressed. Anterior margin of S1: not produced anteriorly, straight. Felt fields on S2: absent. Felt fields on S3: absent. Ovipositor: *Scelio*-type (Austin and Field 1997).

**Generic diagnosis.** The large size and distinctive characters of *Chromoteleia* (metascutellum large and setose, propodeum without projections, marginal vein of fore wing punctiform) make it a relatively easy genus to identify. The setation of the metascutellum is found in relatively few scelionine genera, typically among the more robust genera, and is a useful diagnostic character. *Chromoteleia* appears closest to *Bracalba* Dodd and *Romilius* Walker, from which it can be separated by the setation of the eyes (absent in *Chromoteleia*).

**Comments.** The distribution of *Chromoteleia* in Africa and South America is a phenomenon of biogeographical interest. Dispersal from South America to Africa has been demonstrated in the parasitoid wasp genus *Kapala* Cameron (Eucharitidae) (Murray and Heraty 2016) and a similar event could explain the disjunct distribution of *Chromoteleia*. Alternatively, the dispersal event could have occurred in the opposite direction, followed by radiation in the New World tropics. While there is no direct evidence that the distribution of *Chromoteleia* represents relictual populations, this is likely the case with other scelionine taxa. For example, *Archaeoteleia* Masner, which today is known from New Zealand and South America, has been documented from Burmese amber (Talamas et al. 2017), suggesting that the extant fauna of this genus is the remainder of a once widespread distribution.

*Chromoteleia* is widespread in continental Mesoamerica, Central America, and South America. It is found as far north as the Mexican state of Jalisco, and in the south extends to Itapúa Department in Paraguay and Paraná in southern Brazil. It is noteworthy, though, that it is entirely absent from the Greater Antilles. In the Lesser Antilles, one species, *C. semicyanea*, apparently is endemic in St. Vincent, and a second, *C. aequalis*, is known from Dominica (as well as Guyana). This is unusual for scelionines of comparable size and presumed biology: genera such as *Scelio*, *Baryconus*, *Macroteleia*, *Triteleia* and *Opisthacantha* are common and richly represented in species throughout the Caribbean.

## Character discussion

*Basiconic sensilla on A12*

Seven of the twenty-seven species of *Chromoteleia* clearly have two basiconic sensilla on the apical antennomere (Figure 2), a state that is unknown to us from any other scelionine in which basiconic sensilla are arranged in longitudinal pairs.

## Metapleural setation

The metapleuron in *Chromoteleia* is an important source of characters. In all species there is a line of setigerous foveae along the anterior margin of the metapleuron, corresponding to the dorsal portion of the metapleural sulcus. Directly posterior to this line of setae in the dorsal portion of the sclerite (dorsal metapleural area) there may be patch of setae (Figure 15, black arrow), and its presence or absence separates numerous species.

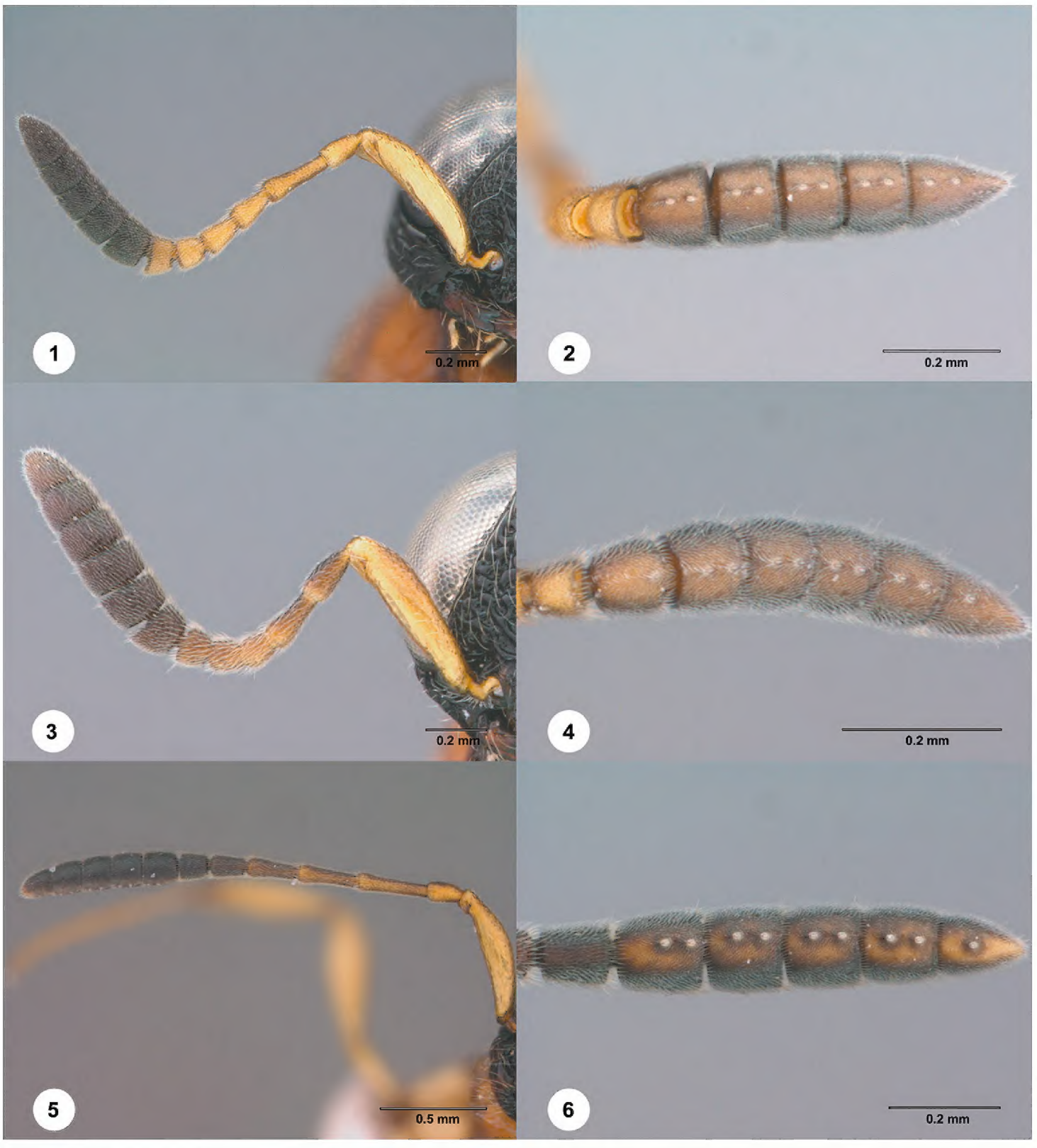
In the ventral portion of the sclerite, there is often a line of setae (Figure 15, white arrow) directly dorsal to the metapleural triangle. These setae can be distinguished from setation of the metapleural triangle because they do not have foveate bases and are located dorsal to the metapleural epicoxal carina, when this carina is present.

*Setation of speculum and subalar pit*

The presence of setae (Figs 14, 15, blue arrow) on the dorsal speculum and surrounding the subalar pit is found in all species of *Chromoteleia* and serves as a useful character for generic diagnosis (http://specimage.osu.edu/getImageInfo.html?image_id=89044). However, because this is a newly recognized character, it has yet to be examined thoroughly throughout Scelioninae. This character is known to us from *Romilius*, *Bracalba*, and *Macroteleia pilosa* Muesebeck.

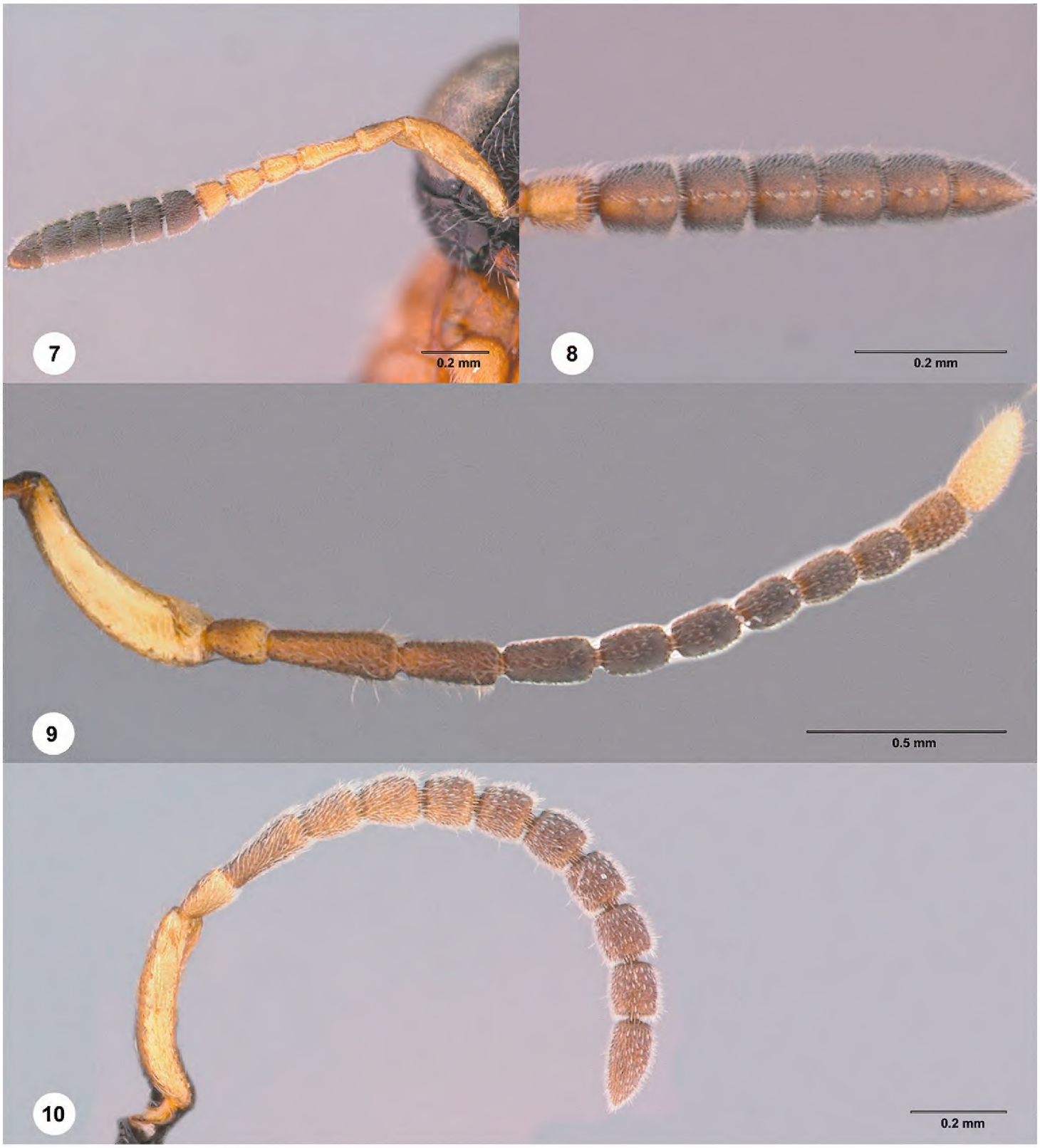
*Body color*

Ashmead presumably coined the name *Chromoteleia* in reference to the remarkable metallic blue head and mesosoma in the type species. This turns out to be unique within the genus, but most species are colorful in a different way. Only a small num-




**Figures 1–6. 1–2** *Chromoteleia tricarinata* Kieffer, female (OSUC 268814). **1** Antenna **2** Antennal clava, ventral view **3–4** *Chromoteleia parvitas* sp. n., holotype, female (OSUC 276182) **3** Antenna **4** Antennal clava, ventral view **5–6** *Chromoteleia longa* sp. n., holotype, female (OSUC 320643) **5** Antenna **6** Antennal clava, ventral view.

ber have the body entirely black or dark brown as is generally typical for other scelionines. Most have more or less extensive parts of the mesosoma colored a rusty red to orange. Masner (1995) and Masner and Hanson (2006) noted that this color pattern is commonly found in a wide range of scelionine genera in species of moderate size (3–10 mm in length) found at lower altitudes (under 2000 m). They attributed the apparent convergent evolution of the color in these taxa to aposematism, a hypothesis that has not yet been critically tested.




**Figures 7–10. 7–8** *Chromoteleia rara* sp. n., female, holotype (OSUC 577495). **7** Antenna **8** Antennal clava, ventral view **9** *Chromoteleia ingens* sp. n., paratype, male (OSUC 583458) Antenna **10** *Chromoteleia bidens* sp. n., paratype, male (OSUC 185675) Antenna.

## World species of *Chromoteleia* Ashmead

*C. aequalis* Chen & Johnson, sp. n.
*C. alternata* Chen & Johnson, sp. n.
*C. bidens* Chen & Masner, sp. n.
*C. congoana* (Risbec)
*C. connectens* Kieffer
= *C. brevitarsis* Kieffer
*C. copiosa* Chen & Johnson, sp. n.
*C. cuneus* Chen & Johnson, sp. n.
*C. curta* Chen & Johnson, sp. n.
*C. depilis* Chen & Johnson, sp. n.
*C. dispar* Chen & Masner, sp. n.
*C. feng* Chen & Johnson, sp. n.

**Figures 11–13.** Wings **11** *Chromoteleia longitarsis* Kieffer, female (OSUC 584896). **12** *Chromoteleia robusta* sp. n., female, paratype (OSUC 577466) **13** *Chromoteleia cuneus* sp. n., female, holotype (OSUC 585001).

*C. fossa* Chen & Johnson, sp. n.
*C. fuscicornis* Kieffer
*C. ingens* Chen & Masner, sp. n.
*C. levitas* Chen & Johnson, sp. n.
*C. longitarsis* Kieffer
*C. longa* Chen & Johnson, sp. n.
*C. maura* Chen & Masner, sp. n.
*C. parvitas* Chen & Johnson, sp. n.
*C. pilus* Chen & Johnson, sp. n.
*C. plana* Chen & Johnson, sp. n.
*C. rara* Chen & Johnson, sp. n.
*C. robusta* Chen & Johnson, sp. n.
*C. rufithorax* Kieffer
*C. semicyanea* Ashmead
*C. semilutea* Chen & Johnson, sp. n.
*C. sparsa* Chen & Johnson, sp. n.
*C. tricarinata* Kieffer

## Key to females

1 Basiconic sensilla on A7 absent (Figs 2, 6) ..... **2**
– Basiconic sensilla on A7 present (Figs 4, 8) ..... **14**
2 Median mesoscutal carina absent (Figs 197, 227, 233, 236) ..... **3**
– Median mesoscutal carina present (Figs 33, 39, 97, 109, 131, 137, 143, 149, 155, 173, 209, 237, 238) ..... **4**
3 Apex of T6 acute in dorsal view (Figure 199); horn on T1 absent (Figure 199); median metascutellar carina indistinguishable from surrounding rugae ..... ***Chromoteleia robusta*** **Chen & Johnson, sp. n.**
– Apex of T6 rounded in dorsal view (Figure 235); horn on T1 present (Figure 235); median metascutellar carina distinct ..... ***Chromoteleia tricarinata*** **Kieffer**
4 A12 with 1 basiconic sensillum ..... **5**
– A12 with 2 basiconic sensilla ..... **10**
5 Posterior notaulus foveate (Figs 61, 67, 143, 149, 155) ..... **6**
– Posterior notaulus smooth (Figs 39, 109, 137) ..... **8**
6 Hind basitarsus as long as remaining segments combined; dorsal metapleural area without setae (Figs 14, 59, 65, 153); ventral metapleural area smooth posteriorly (Figs 14, 59, 65, 153) ..... **7**
– Hind basitarsus distinctly longer than remaining segments combined (Figure 27); dorsal metapleural area setose (Figure 15); ventral metapleural area rugose posteriorly (Figure 15) ..... ***Chromoteleia longitarsis*** **Kieffer**
7 T1 with horn (Figs 61, 67); occipital carina complete (Figs 61, 67); A6 as long as wide (Figure 67) ..... ***Chromoteleia connectens*** **Kieffer**
– T1 without horn (Figure 157); occipital carina interrupted medially (Figure 155); A6 distinctly longer than wide (Figure 5) ..... ***Chromoteleia longa*** **Chen & Johnson, sp. n.**
8 Apex of T6 rounded in dorsal view (Figs 41, 139); T1 with horn (Figs 41, 139) ..... **9**
– Apex of T6 acute in dorsal view (Figure 111); T1 without horn (Figure 111) ..... ***Chromoteleia feng*** **Chen & Johnson, sp. n.**
9 Metasoma variably patterned in alternating orange-yellow and dark brown (Figure 41); mesoscutellum smooth medially, densely punctate laterally (Figure39) ..... ***Chromoteleia alternata*** **Chen & Johnson, sp. n.**
– Metasoma entirely black (Figure 139); mesoscutellum densely punctate rugose (Figure 137) ..... ***Chromoteleia levitas*** **Chen & Johnson, sp. n.**
10 Dorsal metapleural area setose (Figs 129, 171) ..... **11**
– Dorsal metapleural area without setae (Figs 31, 95, 207) ..... **12**
11 A6 distinctly longer than wide (Figure 130); occipital carina complete (Figure 131); hind basitarsus distinctly longer than remaining segments combined ..... ***Chromoteleia ingens*** **Chen & Masner, sp. n.**
– A6 as long as wide (Figure 170); occipital carina interrupted medially (Figure 173); hind basitarsus as long as remaining segments combined (Figure 170) ..... ***Chromoteleia pilus*** **Chen & Johnson, sp. n.**

12 Mesosoma black (Figure 33); netrion densely punctate (Figure 31); mesoscutal midlobe densely punctate (Figure 33) ..... ***Chromoteleia aequalis* Chen & Johnson, sp. n.**

– Mesosoma orange or variably orange to black (Figs 95, 97, 207); netrion longitudinally striate (Figs 95, 207); mesoscutal midlobe densely punctate rugose (Figs 97, 209) ..... **13**

13 Occiput rugose (Figure 97); area directly dorsal to the metapleural triangle with setae (Figure 95); hind coxa densely punctate (Figure 95); T6 at least 1.5× longer than wide (Figure 19) ..... ***Chromoteleia depilis* Chen & Johnson, sp. n.**

– Occiput smooth (Figure 209); area directly dorsal to the metapleural triangle without setae (Figure 207); hind coxa largely smooth, with sparse fine punctures (Figure 207); T6 approximately as long as wide (Figure 211)..... ***Chromoteleia semilutea* Chen & Johnson, sp. n.**

14 Apex of T6 acute in dorsal view (Figs 20, 81, 163)..... **15**

– Apex of T6 rounded in dorsal view (Figs 22, 57, 75, 87, 93, 105, 117, 169, 181, 187, 205, 217, 223)..... **17**

15 Mesosoma variably orange to black (Figs 43, 77); netrion longitudinally striate (Figs 43, 77); notaulus foveate (Figs 45, 79) ..... **16**

– Mesosoma black (Figs 159, 161); netrion rugose (Figure 159); notaulus smooth (Figure 161) ..... ***Chromoteleia maura* Chen & Masner, sp. n.**

16 Metascutellum with deeply incised apex, forming two spines laterally (Figure 45); postmarginal vein approximately as long as stigma vein (Figure 47); T1 without horn (Figure 45). ***Chromoteleia bidens* Chen & Masner, sp. n.**

– Metascutellum trapezoidal with broad apex (Figure 79); postmarginal vein distinctly shorter than stigma vein (Figure 81); T1 with horn (Figure 79) .... ***Chromoteleia cuneus* Chen & Johnson, sp. n.**

17 Hind basitarsus as long as remaining segments combined ..... **18**

– Hind basitarsus distinctly longer than remaining segments combined..... **20**

18 Metasoma orange (Figure 105); mesoscutal midlobe with two rows of foveate grooves along median mesoscutal carina anteriorly, smooth at posterior margin (Figure 103); postmarginal vein distinctly longer than stigmal vein.. ***Chromoteleia dispar* Chen & Masner, sp. n.**

– Metasoma black (Figs 169, 217); mesoscutal midlobe punctate rugose anteriorly, sparsely punctate at posterior margin (Figs 167, 215); postmarginal vein approximately as long as stigmal vein (Figs 169, 217) ..... **19**

19 A5 as wide as long (Figure 3); T1 without horn (Figure 169); T6 approximately as long as wide (Figure 169) ... ***Chromoteleia parvitas* Chen & Johnson, sp. n.**

– A5 distinctly longer than wide (Figure 213); T1 with horn (Figure 215); T6 at least 1.5× longer than wide (Figure 217) ..... ***Chromoteleia sparsa* Chen & Johnson, sp. n.**

20 Postmarginal vein distinctly shorter than stigmal vein (Figs 49, 120, 127, 187)..... **21**

– Postmarginal vein as long as or distinctly longer than stigmal vein (Figs 75, 87, 117, 181, 205)..... **23**

21 Frons directly above interantennal process punctate rugose (Figure 56); dorsal frons with granulate microsculpture (Figure 56); netrion punctate rugose anteriorly, smooth posteriorly (Figure 53) ***Chromoteleia congoana* (Risbec)**

– Frons directly above interantennal process foveolate (Figs 121, 126, 186); dorsal frons without granulate microsculpture (Figs 121, 126, 186); netrion transversely striate (Figs 123, 183) ..... **22**

22 Dorsal metapleural area setose (Figure 123); mesoscutal midlobe sparsely punctate anteriorly (Figure 125); T6 sinuate in lateral view..... ***Chromoteleia fuscicornis* Kieffer**

– Dorsal metapleural area without setae (Figure 183); mesoscutal midlobe punctate rugose anteriorly (Figure 185); T6 flat in lateral view..... ***Chromoteleia rara* Chen & Johnson, sp. n.**

23 Head metallic blue (Figs 203, 204); postmarginal vein distinctly longer than stigma vein (Figure 205); frons without central keel (Figure 204) ..... ***Chromoteleia semicyanea* Ashmead**

– Head black (Figs 74, 116, 180); postmarginal vein approximately as long as stigma vein (Figs 75, 87, 117); frons with central keel (Figs 74, 86, 116, 180) .... **24**

24 Mesoscutal midlobe smooth posteriorly (Figure 179); T2–T3 with a narrow smooth strip medially (Figure 181) ..... ***Chromoteleia plana* Chen & Johnson, sp. n.**

– Mesoscutal midlobe sparsely punctate posteriorly (Figs 73, 85, 115); T2–T3 without a narrow smooth strip medially (Figs 75, 87, 117) ..... **25**

25 Notaulus foveate (Figs 73, 85); mesepisternum below femoral depression without striae (Figs 71, 83) ..... **26**

– Notaulus smooth (Figure 115); mesepisternum below femoral depression with striae (Figure 113)..... ***Chromoteleia fossa* Chen & Johnson, sp. n.**

26 Netrion transversely striae (Figure 71); T6 at least 1.5× longer than wide (Figure 75)..... ***Chromoteleia copiosa* Chen & Johnson, sp. n.**

– Netrion rugose (Figure 83); T6 approximately as long as wide (Figure 87)... ..... ***Chromoteleia curta* Chen & Johnson, sp. n.**

**Key to males (unknown for *C. maura, C. plana, C. fossa, C. parvitas*)**

1 Posterior margin of T7 without lateral spines or rounded projections (Figure 24)..... **2**

– Posterior margin of T7 with lateral spines (Figure 26) or rounded projections (Figure 25)..... **14**

2 Hind basitarsus as long as remaining segments combined (Figure 28)..... **3**

– Hind basitarsus distinctly longer than remaining segments combined (Figure 27)..... **9**

3 Dorsal metapleural area setose (Figs 171, 231)..... **4**

– Dorsal metapleural area without setae (Figs 37, 95, 107, 195, 207) ..... **5**

4 Median mesoscutal carina present anteriorly (Figure 173); ventral metapleural area rugose (Figure 171) ..... ***Chromoteleia pilus*** **Chen & Johnson, sp. n.**

– Median mesoscutal carina absent (Figs 227, 233); ventral metapleural area obliquely striate posteriorly (Figure 231).... ***Chromoteleia tricarinata*** **Kieffer**

5 Area directly dorsal to the metapleural triangle with setae (Figure 95)..... ..... ***Chromoteleia depilis*** **Chen & Johnson, sp. n.**

– Area directly dorsal to the metapleural triangle without setae (Figure 37, 107, 195, 207)..... **6**

6 Frons with central keel developed only in ventral portion of frons (Figs 40, 110)..... **7**

– Frons with central keel complete, extending dorsally to median ocellus (Figs 198, 210) ..... **8**

7 Ventral metapleural area obliquely striate posteriorly (Figure 37); metasoma dark brown to black (Figure 41)..... ..... ***Chromoteleia alternata*** **Chen & Johnson, sp. n.**

– Ventral metapleural area smooth posteriorly (Figure 107); metasoma entirely black (Figure 111)..... ***Chromoteleia feng*** **Chen & Johnson, sp. n.**

8 Metasoma entirely black (Figure 199); median mesoscutal carina absent (Figure 197)..... ***Chromoteleia robusta*** **Chen & Johnson, sp. n.**

– Metasoma with T1–T3 orange to dark brown (Figure 211); median mesoscutal carina present (Figure 209)..... ..... ***Chromoteleia semilutea*** **Chen & Johnson, sp. n.**

9 Dorsal A1 striate..... **10**

– Dorsal A1 smooth or punctate..... **11**

10 Mesosoma entirely black (Figure 33); netrion densely punctate (Figure 31); dorsal metapleural area without setae (Figure 31)..... ..... ***Chromoteleia aequalis*** **Chen & Johnson, sp. n.**

– Mesosoma variably orange and black (Figure 147); netrion rugose (Figure 147); dorsal metapleural area setose (Figure 15)..... ..... ***Chromoteleia longitarsis*** **Kieffer**

11 Head black (Figs 74, 86, 186); frons with central keel (Figs 74, 86, 186); mesopleural carina present (Figs 71, 83, 183) ..... **12**

– Head metallic blue (Figure 204); frons without central keel (Figure 204); mesopleural carina absent ..... ***Chromoteleia semicyanea*** **Ashmead**

12 Occipital carina interrupted medially (Figs 73, 85); postmarginal vein approximately as long as stigma vein (Figs 75, 87)..... **13**

– Occipital carina complete (Figure 185); postmarginal vein distinctly shorter than stigma vein (Figure 187) ..... ..... ***Chromoteleia rara*** **Chen & Johnson, sp. n.**

13 Netrion transversely striate (Figure 71); epicoxal lobe posterior of propleural epicoxal sulcus smooth..... ***Chromoteleia copiosa*** **Chen & Johnson, sp. n.**

– Netrion rugose (Figure 83); epicoxal lobe posterior of propleural epicoxal sulcus densely punctate..... ***Chromoteleia curta*** **Chen & Johnson, sp. n.**

14 Dorsal metapleural area setose (Figs 43, 123, 129) ..... **15**

– Dorsal metapleural area without setae (Figs 14, 53, 77, 101, 135, 153, 213, 219) ..... **17**

15 Metascutellum with deeply incised apex, forming two spines laterally (Figure 45); apex of T7 bispinose (Figure 26) ..... ***Chromoteleia bidens*** **Chen & Masner, sp. n.**

– Metascutellum trapezoidal with broad posterior margin (Figs 119, 125, 131); apex of T7 emarginate between rounded projections (Figure 25) ..... **16**

16 Postmarginal vein distinctly shorter than stigma vein (Figure 127); A6 as long as wide ..... ***Chromoteleia fuscicornis*** **Kieffer**

– Postmarginal vein distinctly longer than stigma vein (Figure 133); A6 approximately 2.0× longer than wide (Figure 9) ..... ***Chromoteleia ingens*** **Chen & Masner, sp. n.**

17 Dorsal A1 striate ..... **18**

– Dorsal A1 smooth or punctate ..... **20**

18 Notaulus foveate (Figs 61, 67, 155); postmarginal vein distinctly longer than stigmal vein (Figs 63, 157) ..... **19**

– Notaulus mostly smooth (Figure 137); postmarginal vein approximately as long as stigmal vein (Figure 139) ..... ***Chromoteleia levitas*** **Chen & Johnson, sp. n.**

19 Occipital carina complete (Figure 61); lateral occiput rugose (Figure 61); gena punctate rugose ventrally (Figure 59) ..... ***Chromoteleia connectens*** **Kieffer**

– Occipital carina interrupted medially (Figure 155); occiput smooth (Figure 155); gena narrowly smooth ventrally (Figure 153) ..... ***Chromoteleia longa*** **Chen & Johnson, sp. n.**

20 Frons without central keel (Figure 104); mesosoma black (Figure 103); postmarginal vein distinctly longer than stigmal vein (Figure 105) ..... ***Chromoteleia dispar*** **Chen & Masner, sp. n.**

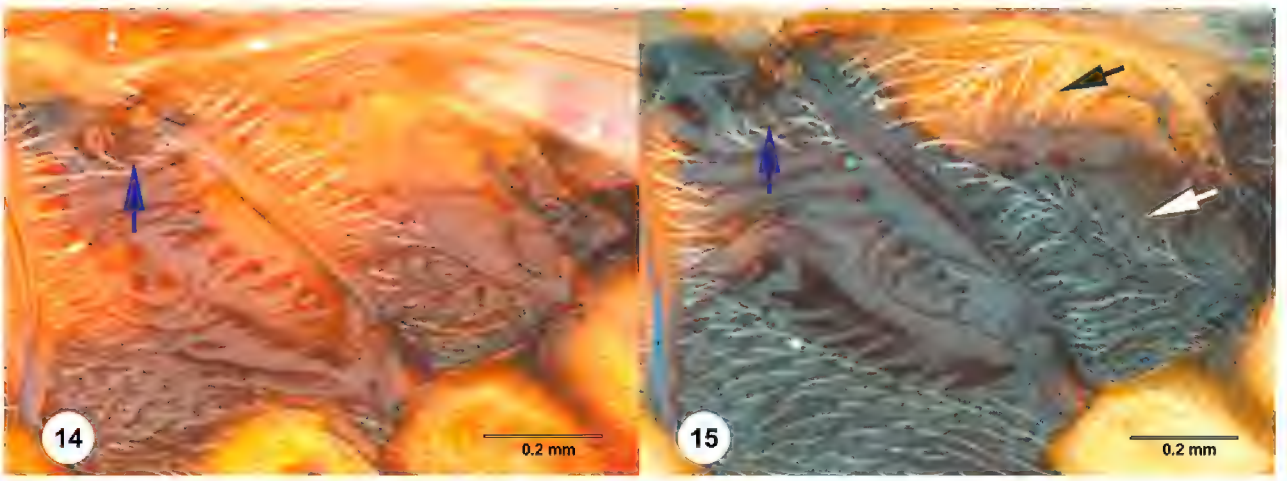
– Frons with central keel (Figs 56, 80, 86); mesosoma variably orange to black (Figs 55, 77, 83); postmarginal vein distinctly shorter than stigmal vein (Figs 49, 81, 87) ..... **21**

21 Mesoscutellum sparsely punctate (Figure 55); T2 without transverse sulcus (Figure 57); hind basitarsus distinctly longer than remaining segments combined ..... ***Chromoteleia congoana*** **(Risbec)**

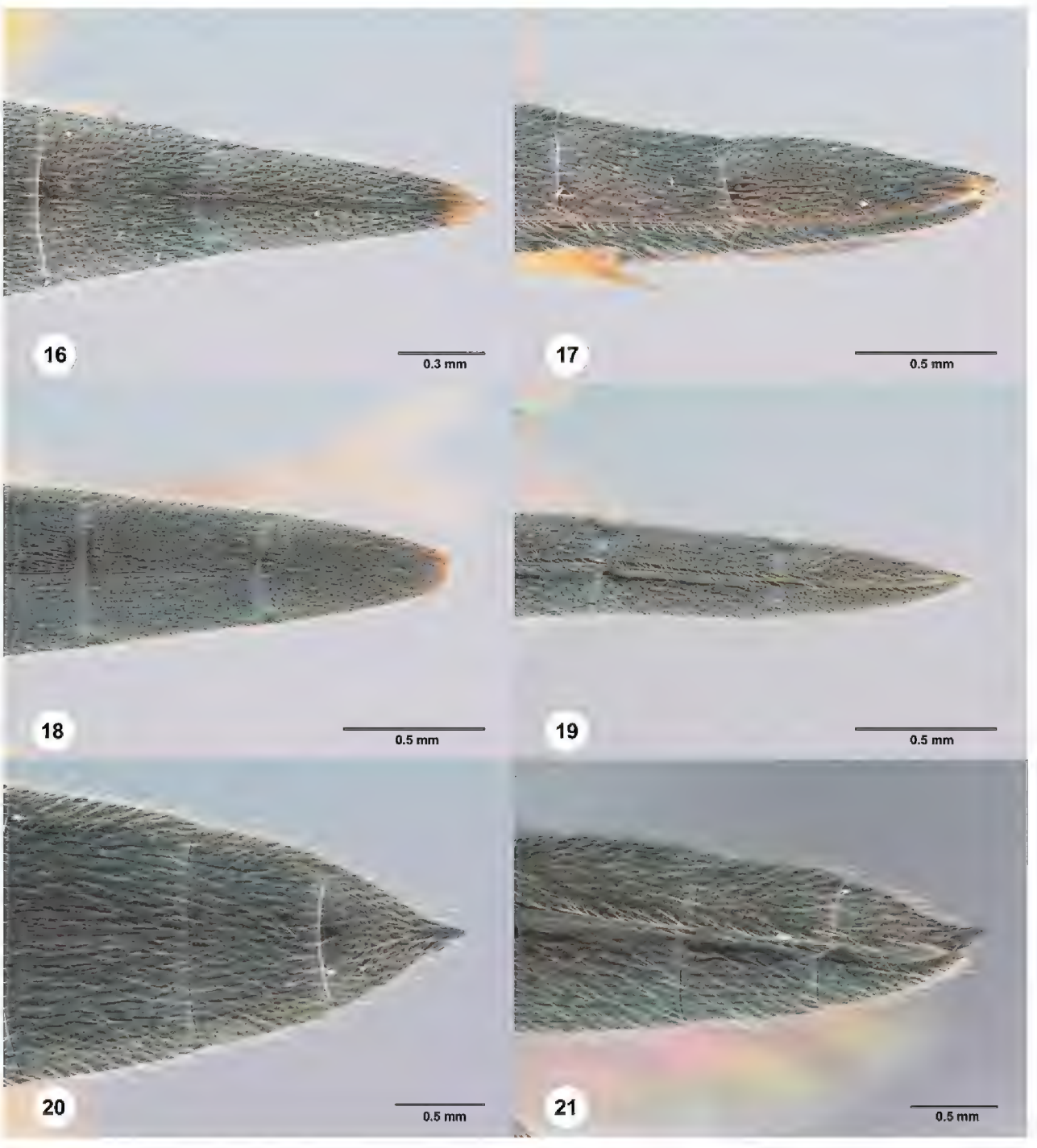
– Mesoscutellum smooth medially, densely punctate laterally (Figs 79, 85); T2 with transverse sulcus (Figs 81, 87); hind basitarsus as long as remaining segments combined ..... **22**

22 Lateral lobe of mesoscutum punctate rugose (Figure 79); netrion transversely striate (Figure 77); hind coxa densely punctate (Figure 77) ..... ***Chromoteleia cuneus*** **Chen & Johnson, sp. n.**

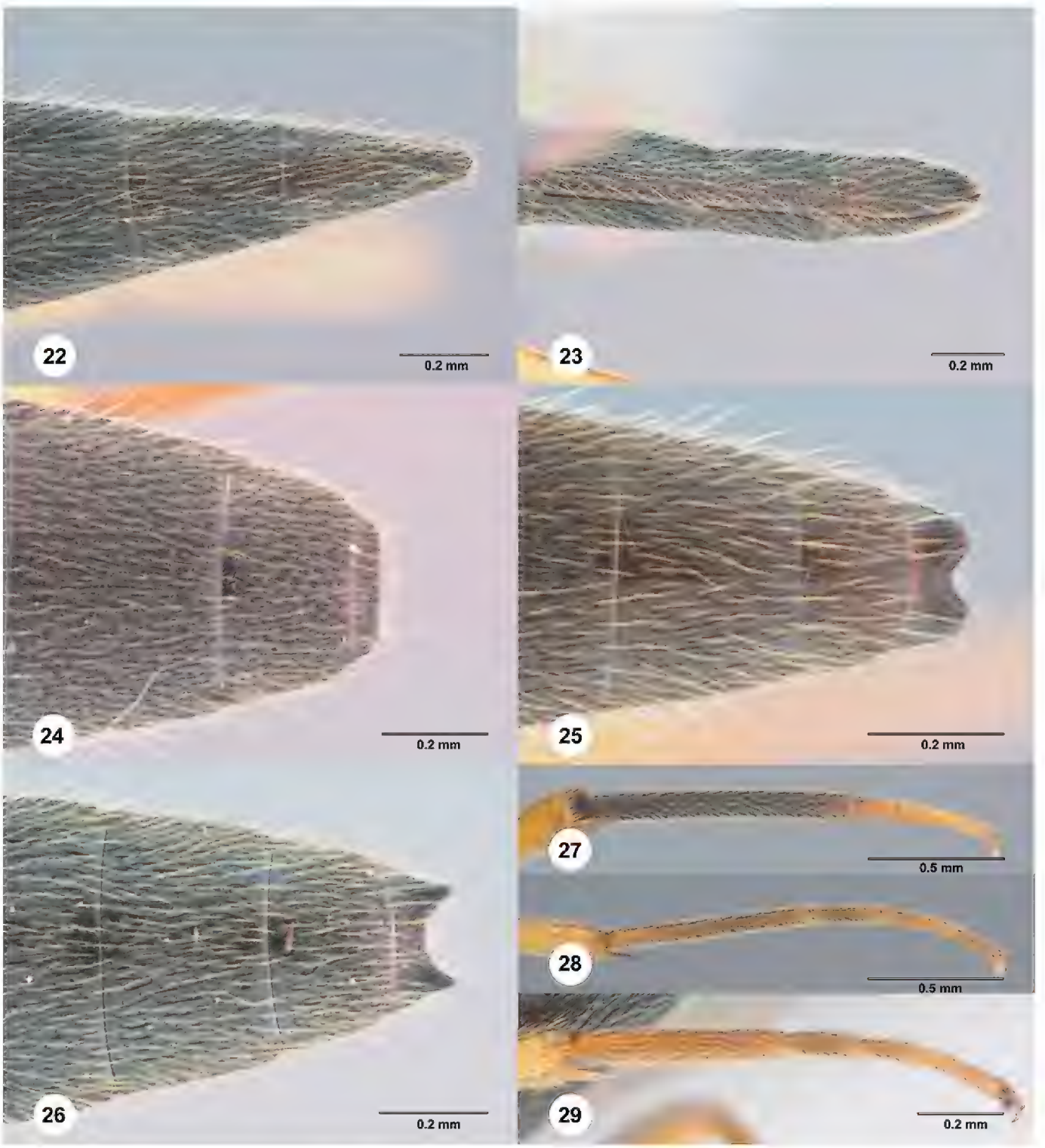
– Lateral lobe of mesoscutum sparsely punctate (Figure 85); netrion rugose (Figure 83); hind coxa largely smooth, with sparse fine punctures ..... ***Chromoteleia sparsa*** **Chen & Johnson, sp. n.**




**Figures 14–15.** Mesopleuron and metapleuron **14** *Chromoteleia connectens* Kieffer, female, holotype (CAS TYPE9618) **15** *Chromoteleia longitarsis* Kieffer, female (OSUC 584896).




**Figures 16–21. 16–17** *Chromoteleia longitarsis* Kieffer, female (OSUC 584896). **16** Apical metasoma, dorsal view **17** Apical metasoma, lateral view **18–19** *Chromoteleia depilis* sp. n., female, holotype (OSUC 577436) ) **18** Apical metasoma, dorsal view **19** Apical metasoma, lateral view **20–21** *Chromoteleia bidens* sp. n., female, holotype (OSUC 577455) **20** Apical metasoma, dorsal view **21** Apical metasoma, lateral view.




**Figures 22–29. 22–23** *Chromoteleia fuscicornis* Kieffer, female (OSUC 584322). **22** Apical metasoma, dorsal view **23** Apical metasoma, lateral view **24** *Chromoteleia longitarsis* Kieffer, male, holotype (CAS TYPE9682), apical metasoma, dorsal view **25** *Chromoteleia fuscicornis* Kieffer, male (OSUC 586417), apical metasoma, dorsal view **26** *Chromoteleia bidens* sp. n., male, paratype (OSUC 577455), apical metasoma, dorsal view Apical **27** *Chromoteleia longitarsis* Kieffer, female (OSUC 584896), hind tarsus **28** *Chromoteleia depilis* sp. n., female, paratype (OSUC 577436), hind tarsus **29** *Chromoteleia bidens* sp. n., female, paratype (OSUC 577455), hind tarsus.

### *Chromoteleia aequalis* Chen & Johnson, sp. n.

http://zoobank.org/A91D1FE4-DEF0-4D3F-BC48-3F29A67FC42A
http://bioguid.osu.edu/xbiod_concepts/452211
Figures 30–35

**Description.** Body length of female: 6.88–7.27 mm (n = 3). Body length of male: 5.90–6.20 mm (n = 3). Color of A1: yellow to orange. A6 in female: distinctly longer

**Figures 30–35.** *Chromoteleia aequalis* sp. n., female, holotype (OSUC 221942). **30** Lateral habitus **31** Head and mesosoma, lateral view **32** Dorsal habitus **33** Head and mesosoma, dorsal view **34** Head, anterior view **35** Metasoma, dorsal view.

than wide. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical

sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: densely punctate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: densely punctate. Macrosculpture of lateral lobe of mesoscutum: densely punctate. Sculpture of notaulus: foveate. Notaular foveae: discrete. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: flat. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: areolate. Sculpture of lateral propodeal area: rugose. Mesopleural carina: absent. Sculpture of mesepisternum below femoral depression: smooth directly below femoral depression, otherwise densely punctate. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: pale yellow with tarsi dark brown to black. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: longitudinally punctate rugose. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: smooth to coriaceous. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely punctate to punctate rugose.

**Diagnosis.** This species is easily recognized by its entirely black body both in female and male, densely punctate mesoscutum, and abbreviated median mesoscutal carina.

**Etymology.** The epithet is inspired by the Latin word for equal, in reference to the black body color shared by males and females, and is intended to be treated as an adjective.

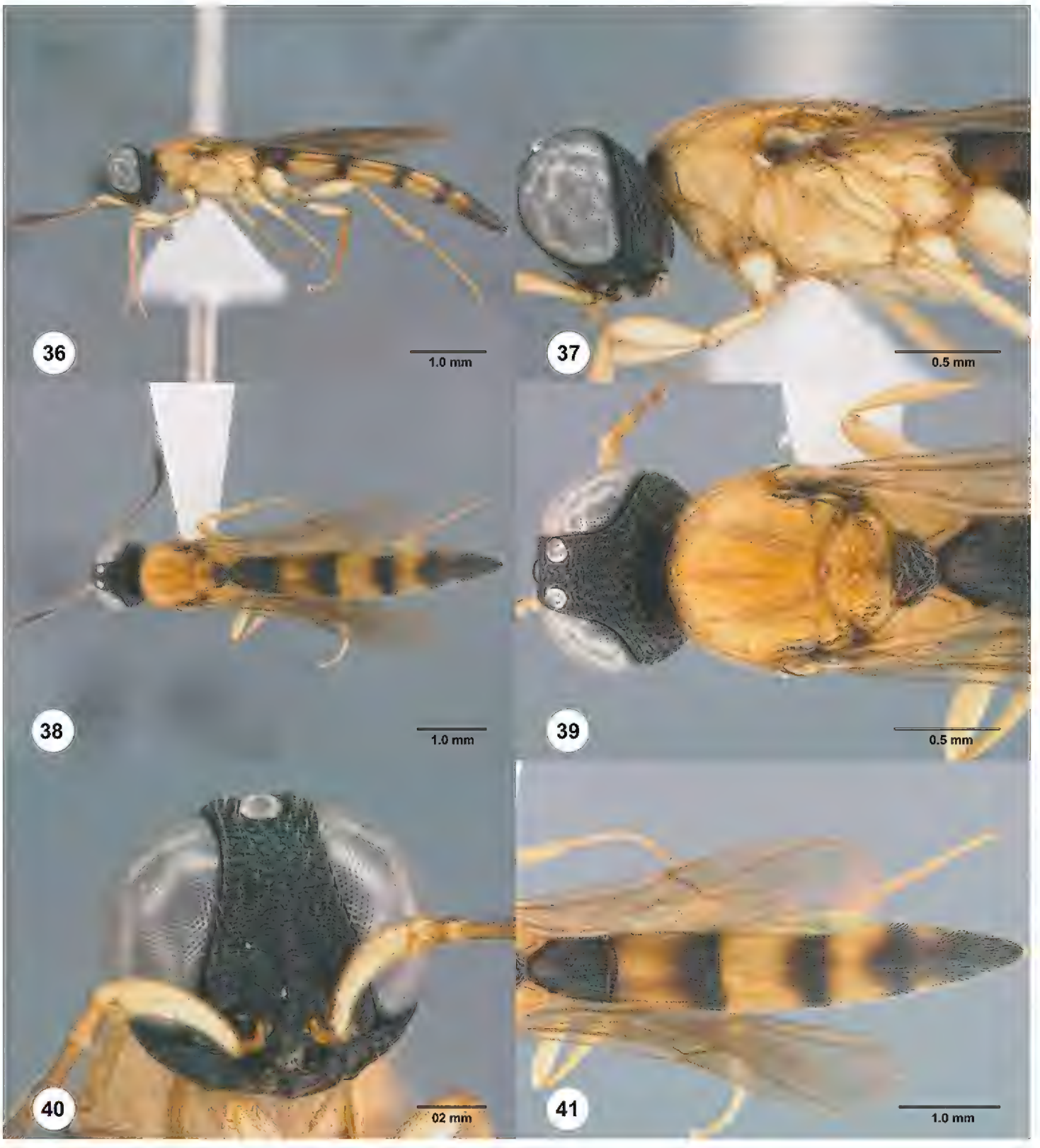
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452211]

**Material examined.** Holotype, female: **DOMINICA**: Saint Paul Parish, Springfield, 94/017, Archbold Tropical Research Center (ATRC), 27.V.1994, J. B. Woolley, OSUC 221942 (deposited in TAMU). *Paratypes*: (2 females, 3 males) **DOMINICA**: 1 female, 3 males, OSUC 584722–584725 (TAMU). **GUYANA**: 1 female, OSUC 215798 (BPBM).

### *Chromoteleia alternata* Chen & Johnson, sp. n.

http://zoobank.org/5BA6E119-AF80-47BA-9BF6-A28039A09E23
http://bioguid.osu.edu/xbiod_concepts/318205
Figures 36–41

**Description.** Body length of female: 5.38–5.90 mm (n = 10). Body length of male: 4.40–4.93 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than




**Figures 36–41.** *Chromoteleia alternata* sp. n., female, holotype (OSUC 136573). **36** Lateral habitus **37** Head and mesosoma, lateral view **38** Dorsal habitus **39** Head and mesosoma, dorsal view **40** Head, anterior view **41** Metasoma, dorsal view.

wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: rugulose. Sculpture of netrion: punctate rugose anteriorly, smooth posterior-

ly. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: smooth. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: rugose anteriorly, sparsely punctate posteriorly. Sculpture of dorsal metapleural area: rugose; smooth. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, obliquely striate posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: variably patterned in alternating orange yellow and dark brown. Color of metasoma in male: dark brown to black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: densely punctate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be easily distinguished from other *Chromoteleia* species by the following combination of characters: female metasoma variably patterned in alternating orange yellow and dark brown, central keel present only in ventral portion of frons, and notaulus smooth.

**Etymology.** The epithet is inspired by the Latin word for alternate, in reference to the variably patterned in alternating orange yellow and yellow on metasoma, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452211]

**Material examined.** Holotype, female: **BRAZIL**: ES, Santa Teresa, 660 m, 19°58'19"S, 40°32'00"W, Santa Lucia Biological Station, 30.V–2.VI.1997, yellow pan trap, W. A. Hoffmann & R. Ribeiro, OSUC 136573 (deposited in OSUC). *Paratypes*: **BRAZIL**: 9 females, 56 males, OSUC 149637, 149645, 202506–202508 (AEIC); OSUC 586304–586305, 586307, 586309, 586320–586321, 586323–586326, 586575–586576, 586582–586584, 586588–586589, 586591–586595, 586597, 586599, 586601–586602 (CNCI); OSUC 199607 (FSCA); OSUC 127206, 128954, 136099, 137616, 148096, 149994, 233157, 233159–233160, 233198, 233332, 235222, 254872–254874, 79997 (MZSP); OSUC 122256, 126972, 138446, 147578, 148058, 148097, 149921, 149995, 150331, 233158, 233161, 233197, 233199, 233331, 246487, 254871, 322558 (OSUC).

***Chromoteleia bidens* Chen & Masner, sp. n.**
http://zoobank.org/9FEF89BB-7DA6-461B-BA7B-3B97EE128F9B
http://bioguid.osu.edu/xbiod_concepts/318198
Figures 10, 20–21, 26, 29, 42–47

**Description.** Body length of female: 4.20–4.80 mm (n = 16). Body length of male: 4.30–4.67 mm (n = 17). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: present. Occipital carina: complete. Granulate microsculpture of vertex: present. Sculpture of occiput: smooth. Sculpture of gena: coarsely punctate rugose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: sparsely punctate. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: granulate. Shape of metascutellum: elongate trapezoidal but with deeply incised apex, forming two spines laterally. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: absent. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose; obliquely striate. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow to brown, with tarsi darker. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: sparse. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: present. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: smooth anteriorly, rugulose posteriorly. Posterior margin of T7 in male: bispinose. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is easily recognized by its bispinose metascutellum, a character not found in any other species of *Chromoteleia*.

**Figures 42–47.** *Chromoteleia bidens* sp. n., female, holotype (OSUC 577455). **42** Lateral habitus **43** Head and mesosoma, lateral view **44** Dorsal habitus **45** Head and mesosoma, dorsal view **46** Head, anterior view **47** Metasoma, dorsal view.

**Etymology.** The epithet is inspired by the Latin word for two-toothed, in reference to the bispinose metascutellum, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=318198]

**Material examined.** Holotype, female: **BRAZIL**: RO, 62 km S Ariquemes, Rancho Grande Farm, 12.XI–22.XI.1991, E. M. Fisher, OSUC 577455 (deposited in CNCI). *Paratypes*: (15 females, 15 males) **BOLIVIA**: 1 female, OSUC 577440 (CNCI). **BRAZIL**: 8 females, 12 males, OSUC 577452–577453, 577456–577458, 584325 (CNCI); OSUC 204986, 204991 (UCDC); OSUC 185665–185676

(USNM). **ECUADOR**: 1 female, OSUC 577454 (CNCI). **FRENCH GUIANA**: 2 females, OSUC 586452, 586827 (CNCI). **GUYANA**: 2 females, OSUC 232995 (BPBM); OSUC 577451 (CNCI). **PERU**: 1 female, 3 males, OSUC 577459, 584310, 586806 (CNCI); OSUC 323993 (OSUC).

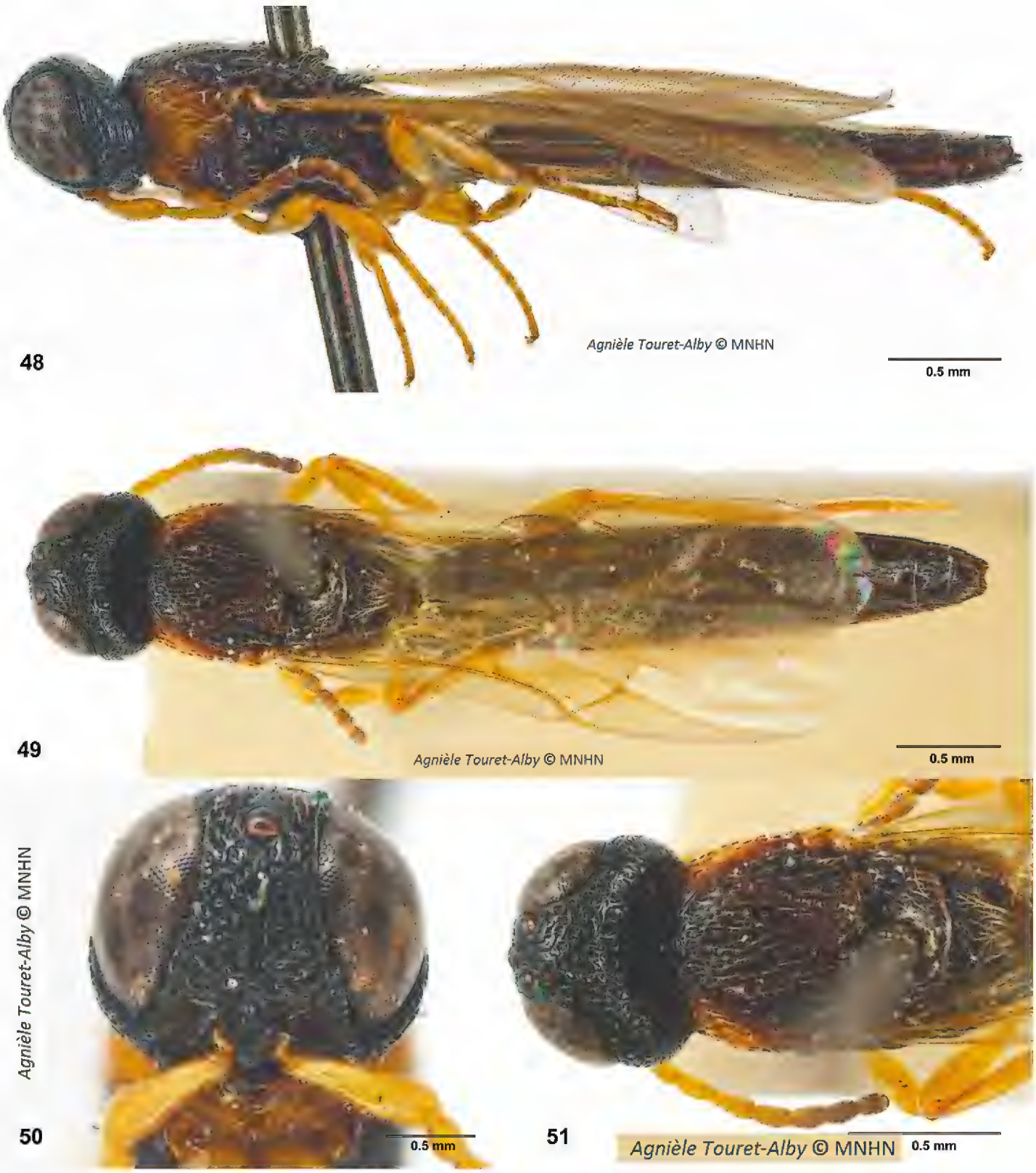
***Chromoteleia congoana* (Risbec)**
http://zoobank.org/381B96B2-0567-4A2C-B2C2-F8E69D0E32A0
http://bioguid.osu.edu/xbiod_concepts/4211
Figures 48–57

*Oxyscelio congoana* Risbec, 1950: 613 (original description).
*Chromoteleia congoana* (Risbec): Masner, 1976: 25 (description, generic transfer, type information); Johnson, 1992: 364 (cataloged, type information).

**Description.** Body length of female: 4.38–5.66 mm (n = 20). Body length of male: 4.10–4.78 mm (n = 4). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: complete. Granulate microsculpture of vertex: present. Sculpture of occiput: rugose. Sculpture of gena: punctate rugose dorsally and ventrally, strigose medially.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: punctate rugose anteriorly, smooth posteriorly. Microsculpture of mesoscutum: coriaceous. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: sparsely punctate. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate throughout. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly shorter than stigmal vein.




**Figures 48–51.** *Oxyscelio congoana* Risbec, male, holotype (EY11376). **48** Lateral habitus **49** Dorsal habitus **50** Head, anterior view **51** Head and mesosoma, dorsal view.

Color of metasoma in female: dark brown. Color of metasoma in male: dark brown to black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: absent. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: smooth anteriorly, rugulose posteriorly. Posterior margin of T7 in male: emarginate medially between

**Figures 52–57.** *Chromoteleia congoana* (Risbec), female (OSUC 207829). **52** Lateral habitus **53** Head and mesosoma, lateral view **54** Dorsal habitus **55** Head and mesosoma, dorsal view **56** Head, anterior view **57** Metasoma, dorsal view.

rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* species by the following combination of characters: median mesoscutal carina only present anteriorly, mesosoma variably orange to black, postmarginal vein distinctly shorter than stigma vein, T2 without transverse sulcus, male T7 with posterior margin deeply emarginated between rounded projections.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4211]

**Material examined.** Holotype, male, *O. congoana*: **GABON**: Estuaire Prov., Libreville, 1901, C. Chalot, EY11376 (deposited in MNHN). Other material: (35 females, 4 males) **CAMEROON**: 3 females, 1 male, OSUC 584461–584464 (CNCI). **CENTRAL AFRICAN REPUBLIC**: 9 females, 1 male, OSUC 226055–226056, 254563, 320836–320837 (OSUC); OSUC 176093, 180933, 207829, 223628, 267420 (SAMC). **DEMOCRATIC REPUBLIC OF THE CONGO**: 1 male, OSUC 584460 (CNCI). **GABON**: 1 female, 1 male, OSUC 584457–584458 (CNCI). **GHANA**: 1 female, OSUC 412136 (OSUC). **GUINEA**: 1 female, OSUC 584459 (CNCI). **NIGERIA**: 20 females, OSUC 584452–584456, 584465–584479 (CNCI).

**Comments.** This species is only found in Afrotropical region.

### *Chromoteleia connectens* Kieffer

http://zoobank.org/7409F8CA-0594-4232-8481-FCC20CDC290E
http://bioguid.osu.edu/xbiod_concepts/4212
Figures 14, 58–69, 237

*Chromoteleia* (*Oxyscelio*) *connectens* Kieffer, 1910a: 313 (original description, keyed).
*Oxyscelio* (*Oxyscelio*) *connectens* (Kieffer): Kieffer, 1910b: 69 (generic transfer).
*Oxyscelio connectens* (Kieffer): Kieffer, 1926: 361, 362 (description, keyed); Dodd, 1931: 77 (excluded from *Oxyscelio*, position uncertain).
*Chromoteleia connectens* Kieffer: Masner, 1976: 25 (type information); Hoebeke, 1980: 26 (type information); Johnson, 1992: 364 (cataloged, type information).
*Chromoteleia brevitarsis* Kieffer, 1910a: 313, 315 (original description, keyed); Masner, 1976: 25 (type information, junior synonym of *Chromoteleia connectens* Kieffer); Johnson, 1992: 364 (type information).
*Petalosema brevitarsis* (Kieffer): Kieffer, 1926: 358, 360 (generic transfer, description, keyed).
http://zoobank.org/C7398CF1-267D-4D5D-B89C-55697354254C
http://bioguid.osu.edu/xbiod_concepts/8526

**Description.** Body length of female: 5.38–5.95 mm (n = 20). Body length of male: 5.10–5.86 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: present. Occipital carina: complete. Granulate microsculpture of vertex: absent; present. Sculpture of occiput: rugose. Sculpture of gena: dorsoventrally strigose.Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural

epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: rugose. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present along full length of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally; longitudinally carinate medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose; smooth. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: rugose anteriorly, sparsely punctate posteriorly. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: orange yellow throughout; orange to pale brown. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black; mostly black with T1–T3 orange to dark brown. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: sparse. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely punctate and granulate. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

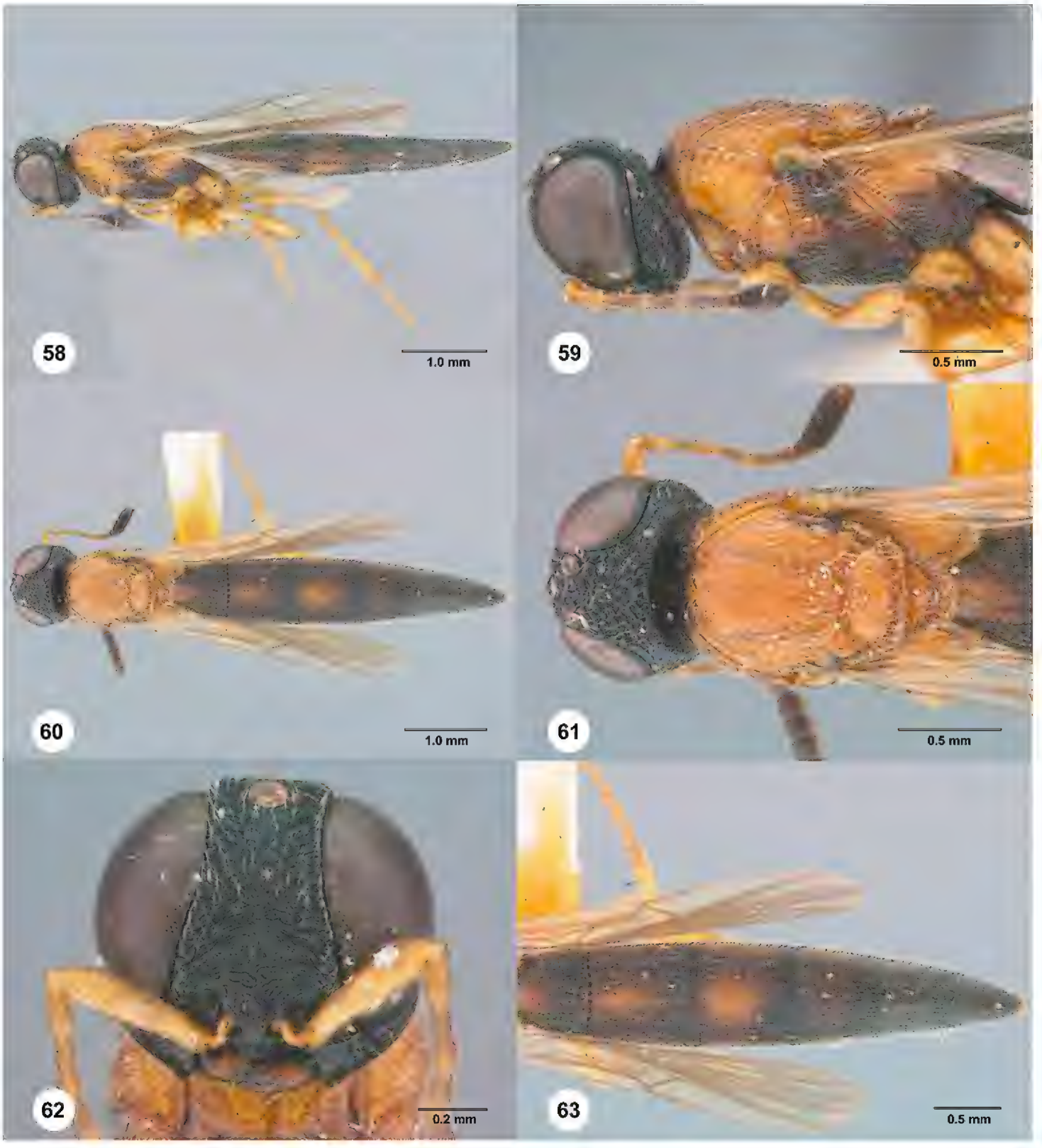
**Diagnosis.** This species can be distinguished from other *Chromoteleia* by the following combination of characters: female A7 without basiconic sensillum, occipital carina complete, median mesoscutal carina present along full length of mesoscutum, ventral metapleural area smooth posteriorly, postmarginal vein distinctly longer than stigma vein, male T7 with posterior margin deeply emarginated between rounded projections.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4212]

**Material examined.** Holotype, female, *C. brevitarsis*: **BRAZIL**: PA, no date, Baker, CAS TYPE9597 (deposited in CAS). Holotype, female, *C. connectens*: **BRAZIL**: PA, no date, Baker, CAS TYPE9618 (deposited in CAS).

**Other material:** (524 females, 594 males) **BELIZE**: 1 female, OSUC 586444 (CNCI). **BOLIVIA**: 5 females, 7 males, OSUC 584139–584140, 584298–584300 (CNCI); DPI_FSCA 00010202–00010208 (CSCA). **BRAZIL**: 77 females, 73 males, OSUC 202485, 202488, 202490, 202493, 202495–202497, 202499–202501, 202515–202517, 202519, 202523, 202532, 202535 (AEIC); OSUC 232991 (BPBM); OSUC 583467–583468, 583471, 583473–583475,

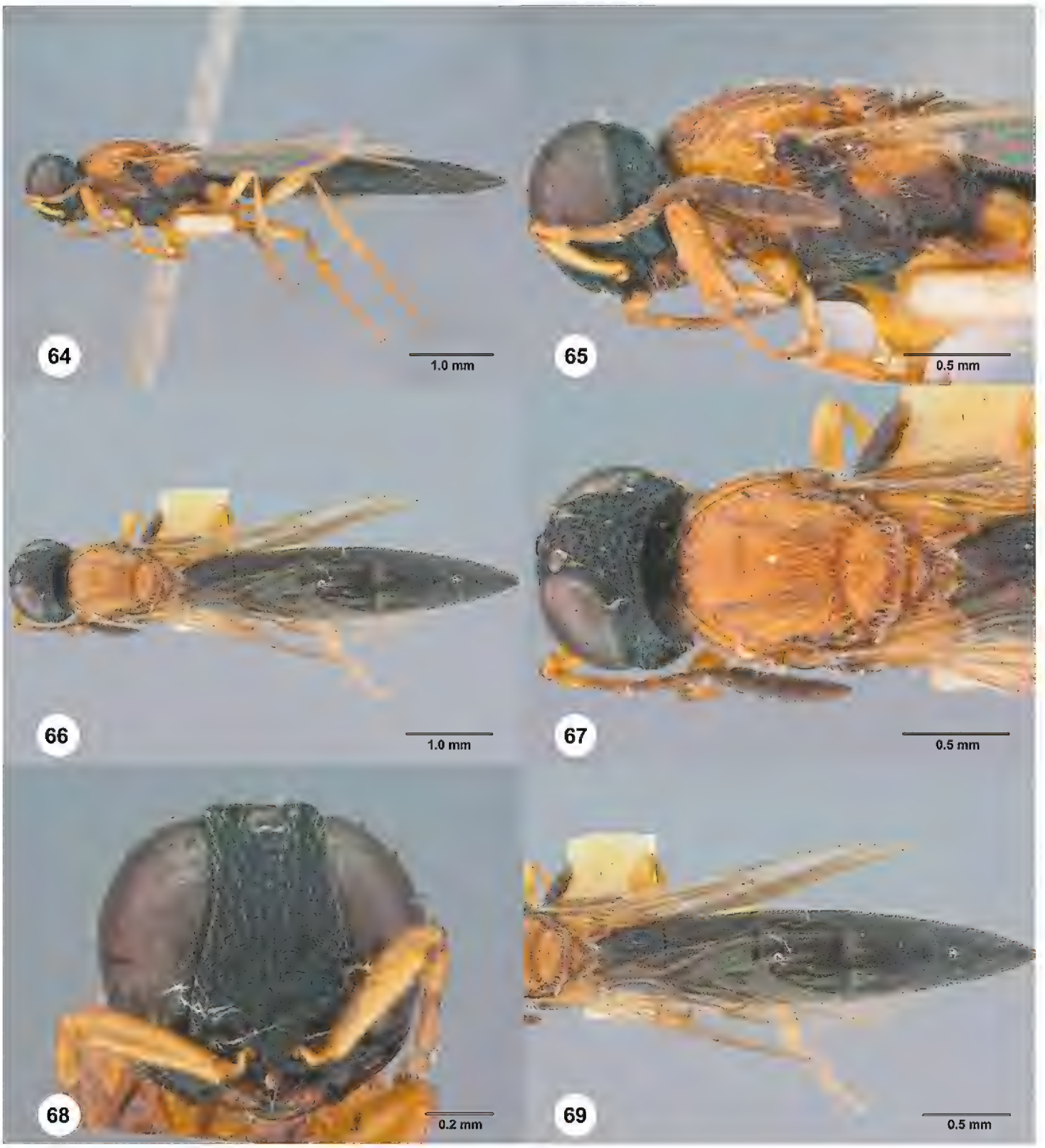
583484–583485, 583492, 583495–583496, 583498, 583510, 583516, 584146, 584152, 584161, 584164–584165, 584171–584175, 584177, 584330, 584334, 584336, 586124–586126, 586131–586132, 586134, 586352, 586356, 586358, 586365, 586368, 586394–586395, 586397–586398, 586404, 586406, 586418–586419, 586567–586568, 586796 (CNCI); OSUC 199611, 199634 (FSCA); OSUC 181648, 225221, 225223, 225240, 231875, 233121, 233201, 233295, 233345, 235221, 267216, 322173, 322599, 326391, 326465, 344484, 354669, 359051, 359057, 359059, 359065, 359067, 359076, 370978, 379216, 380242, 449172, 449186–449187 (MPEG); OSUC 112474, 112594, 112933, 132283, 132337–132338 (MZSP); OSUC 132223, 132546, 132576, 132614, 225220, 225239, 233200, 233320, 255000, 322166, 322175, 322598, 322639, 326569, 345343, 359056, 359063–359064, 359068, 370976–370977, 379214, 381994, 449168, 449178, 48530, 48535, 56248, 56250, 56257–56258, 56260, 56262 (OSUC); OSUC 204987, 204989 (UCDC); OSUC 225298–225300, 225302–225304, 225309, 225312, 225314–225315 (USNM). **COLOMBIA**: 49 females, 55 males, OSUC 584137, 584301 (CNCI); OSUC 143884, 143894–143895, 143897, 143899, 143901, 144022, 152042–152043, 152069, 152071, 162521, 162680–162681, 166453, 166456–166457, 166521, 166555, 170459, 176951, 182582–182583, 182713, 188629–188630, 188632–188633, 188691–188692, 188783, 189043–189044, 189046, 190347–190348, 190350, 190901, 191362, 193136, 193185, 193429, 193456–193458, 193460, 193661, 193664, 193680, 193819, 193960–193962, 228571, 228601, 228603–228605, 228607, 230379, 230434, 230436, 230439, 232724, 232726, 249925–249926, 253478, 269375, 270003, 270005–270007, 321676 (IAVH); OSUC 143896, 143898, 152070, 152072, 162520, 162679, 166450, 166458, 166520, 166565, 166588, 170460, 176950, 182581, 189045, 190349, 191043, 191173, 193168, 193184, 193793, 228602, 228606, 232723, 249928, 269377, 270004, 273444 (OSUC). **COSTA RICA**: 145 females, 195 males, 1 unknown, OSUC 202537, 202539–202540, 202549, 205189 (AEIC); OSUC 232993 (BPBM); OSUC 232189, 253965, 253967–253968, 253970–253971, 556950, 556971, 556973–556977, 556980, 556982–556985, 556993, 556995–556996, 556999, 557001, 557004, 557010, 557014, 557018, 557023, 557048, 557050–557051, 557053, 557058, 557084, 557087, 577888–577893, 577895–577896, 577899, 577908, 577927, 577929, 577938, 577940, 577943–577944, 577947, 577949–577951, 577954–577955, 577962, 577964, 577971, 577974–577978, 577980–577984, 577986–577987, 577989–577990, 577992–577999, 578001, 578007, 578009, 578012–578013, 578018, 578020–578022, 578025–578043, 578045, 578047–578052, 578066, 578073, 578076, 578080, 578085, 578092, 578097, 578099, 578104, 583413, 583415–583416, 583422–583423, 583461, 583479, 583482, 583508, 583511–583513, 583731, 583739, 583756, 583760, 583763–583764, 583768–583771, 583773, 583787, 583794, 583796, 583834, 583850, 583878, 583881, 583890–583892, 583896–583897, 583901, 583910, 583916, 583926–583928, 583931–583938, 583947–583948, 583978, 583980, 583982, 583988–583990, 583992,




**Figures 58–63.** *Chromoteleia connectens* Kieffer, female, holotype (CAS TYPE9618). **58** Lateral habitus **59** Head and mesosoma, lateral view **60** Dorsal habitus **61** Head and mesosoma, dorsal view **62** Head, anterior view **63** Metasoma, dorsal view.

583994, 583997–583998, 584003–584006, 584008–584009, 584012, 584014, 584016–584017, 584019, 584023, 584026–584028, 584031, 584226, 584228, 584231–584232, 584234, 584237, 584239, 584241, 584245–584246, 584248–584249, 584251, 584253–584259, 584271–584273, 584277–584280, 584284–584286, 584288–584293, 586121, 586123, 586130, 586150–586151, 586161, 586163–586164, 586166–586168, 586171, 586179–586181, 586183, 586194, 586196, 586198, 586200–586201, 586203, 586205–586206, 586209, 586212–586214, 586216, 586260–586261, 586268–586269, 586271–586274, 586293–

586295, 586302, 586357, 586390, 586399, 586415, 586449, 586451, 586471, 586474–586476, 586485, 586493, 586499, 586501, 586510, 586513, 586516–586520, 586541–586543, 586559, 586619–586620, 586638–586640, 586645, 586648–586649, 586656, 586658–586659, 586679, 586681, 586764, 586778, 586781, 586783, 586785–586787, 586831, 586833, 586837, 586839, 586841 (CNCI); DPI_FSCA 00010229–00010230, SM0810076, SM0810559 (KUNH); OSUC 205812 (UCDC). **ECUADOR**: 122 females, 166 males, OSUC 149644, 202502 (AEIC); OSUC 181428, 557030, 557034, 557037, 557042–557045, 557092–557094, 557096, 557098, 583476–583477, 583751, 584047–584059, 584061–584073, 584075–584082, 584084–584096, 584099–584101, 584105, 584110–584111, 584120–584121, 584123–584130, 584132, 584134–584136, 584399, 584401, 584403, 584405–584406, 584408, 584411–584413, 584415, 584427, 584430, 584432–584451, 584807–584816, 584818–584837, 584839–584856, 585089–585090, 585097, 586142–586144, 586178, 586311–586313, 586317–586319, 586335, 586359, 586413, 586546–586553, 586555–586556, 586558, 586625, 586633, 586668–586670, 586672–586676, 586693, 586696–586707, 586709–586713, 586715–586720, 586723, 586725–586726, 586728–586730, 586732–586746, 586873 (CNCI); DPI_FSCA 00010184–00010201, 00010209 (CSCA); OSUC 199615–199629 (FSCA); OSUC 221931, 221939 (TAMU); OSUC 204993, 204995–204996, 204998 (UCDC). **FRENCH GUIANA**: 36 females, 28 males, OSUC 555804, 555814, 555819, 586222, 586225, 586228–586230, 586232, 586234–586238, 586240–586242, 586244–586245, 586247–586255, 586257, 586423, 586427, 586434, 586436, 586439, 586443, 586446, 586453–586458, 586461–586464, 586609–586612, 586830, 586844–586845, 586850–586851, 586854–586855, 586859 (CNCI); SM0096678 (KUNH); OSUC 267215, 47019–47021, 47023 (OSUC). **GUATEMALA**: 2 females, 1 male, OSUC 203118 (AEIC); OSUC 584925 (CNCI); OSUC 204701 (UCDC). HONDURAS: 1 male, OSUC 413764 (MZLU). **PANAMA**: 8 females, 8 males, OSUC 556951, 584182, 584379, 586623v586624, 586626, 586629, 586824 (CNCI); DPI_FSCA 00010227 (KUNH); OSUC 221921, 233027, 271017–271020, 320637 (TAMU). **PERU**: 24 females, 17 males, OSUC 149639 (AEIC); OSUC 578057, 578060, 578062, 584305, 584307–584308, 584314–584316, 586135–586137, 586185–586188, 586190–586192, 586421–586422, 586441–586442, 586805, 586808–586814, 586846, 586865 (CNCI); OSUC 218803–218805 (INHS); DPI_FSCA 00010228 (KUNH); OSUC 223890, 323994 (OSUC); OSUC 225399 (USNM). **VENEZUELA**: 55 females, 43 males, OSUC 149646 (AEIC); OSUC 578015, 583517, 586145 (CNCI); OSUC 230357–230359, 230361, 232281, 232827–232830, 251645–251647, 251649, 251651–251652, 251655, 251657–251661, 251663–251666, 251668–251670, 251672–251675, 251677–251681, 251683–251684, 251686–251688, 251690, 320743–320745, 320747–320753, 321367, 321369–321371, 321373–321374, 321376–321379, 321382, 323405, 323407–323412, 323414, 381986–381987,




**Figures 64–69.** *Chromoteleia brevitarsis* Kieffer, female, holotype (CAS TYPE9597). **64** Lateral habitus **65** Head and mesosoma, lateral view **66** Dorsal habitus **67** Head and mesosoma, dorsal view **68** Head, anterior view **69** Metasoma, dorsal view.

381989, 381991–381992 (MIZA); OSUC 230360, 232282, 251643, 251648, 251650, 251653, 251656, 251671, 251682, 251685, 251692, 321368, 321372, 321375, 321380–321381, 323406 (OSUC).

**Comments.** This species exhibits variation in color and microsculpture. The development of microsculpture on vertex could be absent or present; mesoscutum smooth or carinate medially; mesoscutellum, mesopleuron, and metapleuron ranging from orange to dark brown or black.

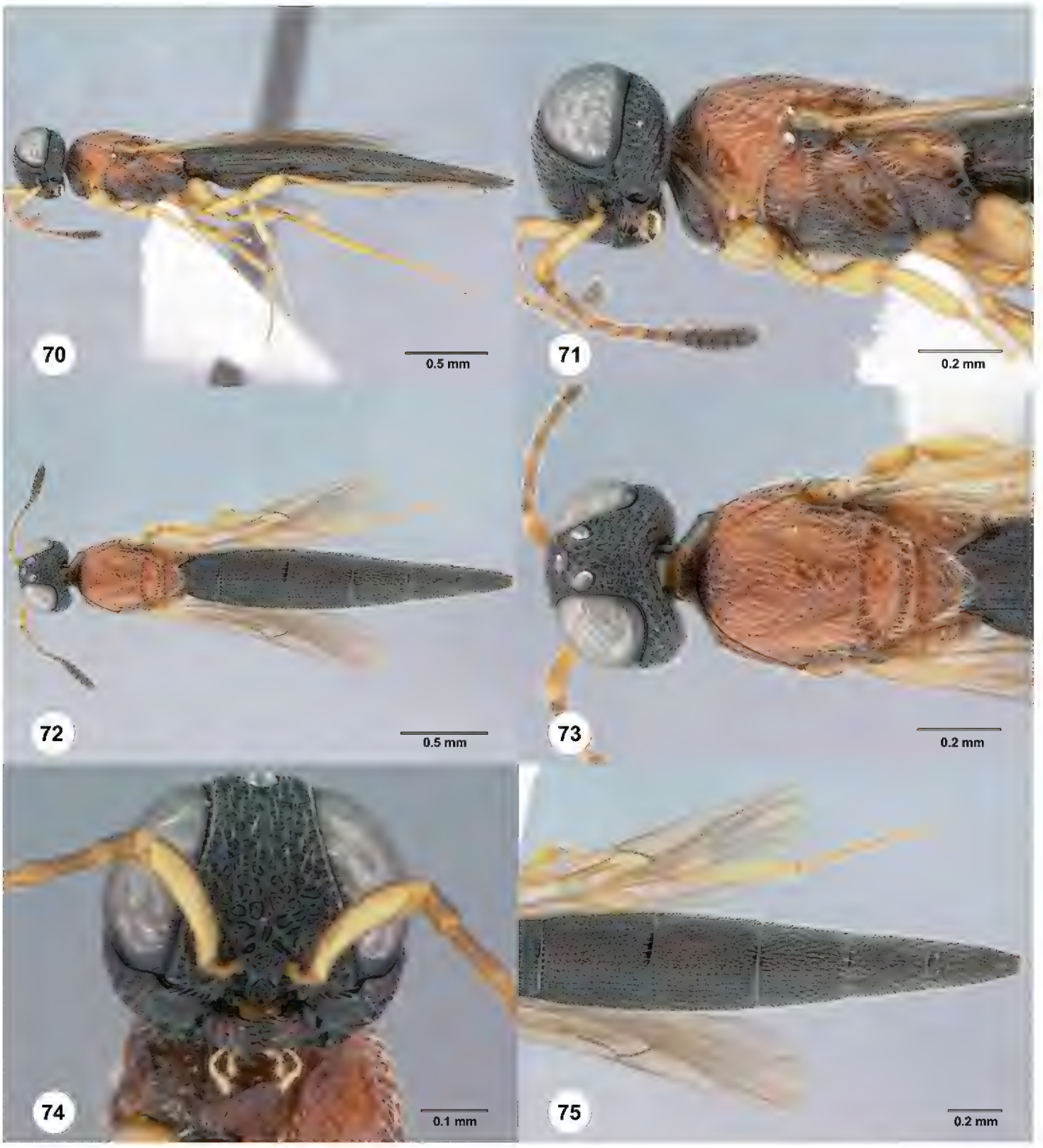
***Chromoteleia copiosa*** **Chen & Johnson, sp. n.**
http://zoobank.org/E61DC4D8-138F-4525-8A8A-79476002AAA8
http://bioguid.osu.edu/xbiod_concepts/452220
Figures 70–75

**Description.** Body length of female: 4.78–5.76 mm (n = 20). Body length of male: 4.30–5.33 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: punctate rugose dorsally and ventrally, strigose medially.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: densely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse; dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: coriaceous anteriorly, densely punctate posteriorly. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.




**Figures 70–75.** *Chromoteleia copiosa* sp. n., female, holotype (OSUC 577518). **70** Lateral habitus **71** Head and mesosoma, lateral view **72** Dorsal habitus **73** Head and mesosoma, dorsal view **74** Head, anterior view **75** Metasoma, dorsal view.

**Diagnosis.** This species is similar to *C. sparsa*, but it can be distinguished by its medially interrupted occipital carina, transversely striate netrion, and the hind basitarsus that is distinctly longer than the remaining segments combined.

**Etymology.** The epithet is inspired by the Latin word for abundant, in reference to the densely punctate rugose ventral mesepisternum, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452220]

**Material examined.** Holotype, female: **BELIZE**: Orange Walk Dist., Rio Bravo Conservation and Management Area, 15.VII–21.VII.1996, Malaise trap, P. Kovarik, OSUC 577518 (deposited in CNCI). *Paratypes*: (54 females, 10 males) **BELIZE**: 11 females, OSUC 556953–556954, 556966, 577508, 577511–577512, 577516–577517, 586761 (CNCI); OSUC 254866–254867 (OSUC). **BRAZIL**: 1 male, OSUC 584162 (CNCI). COLOMBIA: 1 female, OSUC 584304 (CNCI). **COSTA RICA**: 33 females, 6 males, OSUC 577902, 577910–577911, 577914–577916, 577918–577922, 583913, 583954, 583956, 583958–583959, 583962, 583964–583965, 583967–583970, 583972–583975, 584033 (CNCI); OSUC 577909, 577913, 577917, 583955, 583957, 583960–583961, 583963, 583966, 583971, 586162 (OSUC). **GUATEMALA**: 2 females, OSUC 577513, 577520 (CNCI). **HONDURAS**: 1 male, OSUC 577515 (CNCI). **MEXICO**: 4 females, 2 males, OSUC 577507, 577514, 577519, 584721 (CNCI); OSUC 271012 (OSUC); OSUC 271015 (UNAM). **PANAMA**: 1 female, OSUC 584382 (CNCI). **TRINIDAD AND TOBAGO**: 1 female, OSUC 583478 (CNCI). **VENEZUELA**: 1 female, OSUC 586289 (CNCI).

***Chromoteleia cuneus* Chen & Johnson, sp. n.**
http://zoobank.org/BD48157A-CEA8-45EA-BCC2-11E2807CA094
http://bioguid.osu.edu/xbiod_concepts/452221
Figures 13, 76–81

**Description.** Body length of female: 4.88–5.10 mm (n = 20). Body length of male: 4.30–4.89 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: coarsely punctate rugose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: largely smooth, punctate rugose

**Figures 76–81.** *Chromoteleia cuneus* sp. n., female, holotype (OSUC 585001). **76** Lateral habitus **77** Head and mesosoma, lateral view **78** Dorsal habitus **79** Head and mesosoma, dorsal view **80** Head, anterior view **81** Metasoma, dorsal view.

anteriorly and directly below femoral depression. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow to brown, with tarsi darker. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly shorter than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male:

dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: present. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: coriaceous anteriorly, densely punctate posteriorly. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* by the following combination of characters: frons with central keel developed only in ventral portion of frons, dorsal metapleural area without setae, postmarginal vein distinctly shorter than stigmal vein, apex of T6 acute in dorsal view, male T7 with posterior margin deeply emarginate medially between rounded projections.

**Etymology.** The epithet is inspired by the Latin word for wedge, in reference to the shape of T6 in female, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452221]

**Material examined.** Holotype, female: **ECUADOR**: Santo Domingo de los Tsáchilas Prov., 16 km SE Santo Domingo de los Colorados, Tinalandia, 500 m, 4.VI–14.VI.1976, S. Peck & J. Peck, OSUC 585001 (deposited in CNCI). *Paratypes*: (61 females, 52 males) **COSTA RICA**: 2 females, OSUC 577898, 586775 (CNCI). **ECUADOR**: 58 females, 52 males, OSUC 202533 (AEIC); OSUC 583757, 584074, 584107–584109, 584416–584419, 584421–584422, 584424, 584426, 584758, 585003–585004, 585006–585012, 585014–585021, 585023–585028, 585030–585043, 585045–585076, 585078, 585080, 585082–585088, 586327–586328, 586635, 586847–586848 (CNCI); OSUC 369619 (MZLU); OSUC 584420, 584423, 584425, 585002, 585005, 585013, 585022, 585029, 585077, 585079, 585081 (OSUC). **PANAMA**: 1 female, OSUC 271021 (TAMU). *Other material*: **ECUADOR**: 2 females, 1 male, DPI_FSCA 00010213–00010215 (CSCA).

### *Chromoteleia curta* Chen & Johnson, sp. n.

http://zoobank.org/E661A7C8-E5DA-4F9A-8507-6D8447DC59AA
http://bioguid.osu.edu/xbiod_concepts/318230
Figures 82–93, 239

**Description.** Body length of female: 4.23–5.27 mm (n = 20). Body length of male: 4.10–5.13 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.

**Figures 82–87.** *Chromoteleia curta* sp. n., female, holotype (OSUC 185626). **82** Lateral habitus **83** Head and mesosoma, lateral view **84** Dorsal habitus **85** Head and mesosoma, dorsal view **86** Head, anterior view **87** Metasoma, dorsal view. (NOTE: light form)

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: rugose. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: flat. Sculpture of

**Figures 88–93.** *Chromoteleia curta* sp. n., female, paratype (OSUC 149925). **88** Lateral habitus **89** Head and mesosoma, lateral view **90** Dorsal habitus **91** Head and mesosoma, dorsal view **92** Head, anterior view **93** Metasoma, dorsal view. (NOTE: dark form)

mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate throughout. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly

longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. parvitas*, but it can be distinguished by the combination of the following characters: A5 in female distinctly longer than wide, postmarginal vein approximately as long as stigmal vein, female T1 horn present.

**Etymology.** The epithet is inspired by the Latin word for shortened, in reference to the short median mesoscutal carina, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=318230]

**Material examined.** Holotype, female: **BRAZIL**: SP, Trilha da Anta, Base Barra Grande, YPT B0, Intervales State Park, 11.XII–14.XII.2000, yellow pan trap, M. T. Tavares, OSUC 185626 (deposited in MZSP). *Paratypes*: (22 females, 25 males) **BRAZIL**: 13 females, 19 males, OSUC 202509 (AEIC); OSUC 578000, 583491, 586148, 586396 (CNCI); OSUC 126962, 129282, 147965, 148090, 148098, 148100, 149925, 149996, 150330, 150442, 185627, 263040, 66311, 79986 (MZSP); OSUC 127095, 128181, 128644, 147683–147684, 147730, 148057, 148059, 148089, 149844, 149997, 185628, 79987 (OSUC). **MEXICO**: 1 male, OSUC 586432 (CNCI). **VENEZUELA**: 9 females, 5 males, OSUC 578014, 578016–578017, 584142 (CNCI); OSUC 251654, 251689, 376068, 376070–376071 (MIZA); OSUC 376069, 376072–376073, 376075, 381988 (OSUC).

**Comments.** This species is extremely variable in mesosoma color and can be roughly divided into dark and light forms.

### *Chromoteleia depilis* Chen & Johnson, sp. n.

http://zoobank.org/30F7A6B0-982F-4A20-8ACC-EDA6322C9E22
http://bioguid.osu.edu/xbiod_concepts/452216
Figures 18–19, 28, 94–99

**Description.** Body length of female: 5.48–7.65 mm (n = 20). Body length of male: 4.34–5.85 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly longer than wide. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of

frons directly above interantennal process: transversely striate to rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: rugose. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: variably orange to black; orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: discrete. Median mesoscutal carina: present along full length of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: absent; present. Sculpture of mesepisternum below femoral depression: smooth directly below femoral depression, otherwise densely punctate. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow to brown, with tarsi darker. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: smooth to coriaceous. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. pilus*, but it can be distinguished by the combination of the following characters: dorsal metapleural area without setation, A6 in female distinctly longer than wide.

**Etymology.** The epithet is inspired by the Latin word for hairless, in reference to the hairless dorsal metapleural area, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452216]

**Material examined.** Holotype, female: **GUATEMALA**: Zacapa Dept., 3.5 km SE La Unión, 1500 m, 20.VI–27.VI.1993, flight intercept trap, J. Ashe & R. Brooks, OSUC 577436 (deposited in CNCI). *Paratypes*: (75 females, 38 males) **BELIZE**: 11 females, 1 male, OSUC 556955, 583463–583464, 584746–584747, 586420,

**Figures 94–99.** *Chromoteleia depilis* sp. n., female, holotype (OSUC 577436). **94** Lateral habitus **95** Head and mesosoma, lateral view **96** Dorsal habitus **97** Head and mesosoma, dorsal view **98** Head, anterior view **99** Metasoma, dorsal view.

586426, 586748–586750, 586759–586760 (CNCI). **COSTA RICA**: 23 females, 12 males, OSUC 232059, 232187, 253969, 556990–556991, 557062, 577484–577487, 583436, 583889, 583952–583953, 583981, 584042, 584045, 584767–584777, 586487, 586489, 586494, 586500, 586534, 586538 (CNCI); OSUC 369615 (MZLU). **EL SALVADOR**: 2 females, 1 male, OSUC 583419, 586840, 586842 (CNCI). **GUATEMALA**: 3 females, 3 males, OSUC 234526 (BPBM); OSUC 577437–577439, 584728–584729 (CNCI). **HONDURAS**: 5 females, OSUC 199605 (FSCA); OSUC 369623, 369625, 413765, 413772 (MZLU). **MEXICO**:

31 females, 16 males, OSUC 149648–149649, 202503 (AEIC); OSUC 577496–577498, 584726–584727, 584730–584745, 586428–586431 (CNCI); OSUC 271006–271010, 321342, 322559, 372145, 377930, 415086–415089, 49325, 576180–576181, 576183 (OSUC); OSUC 221930, 221934 (TAMU). **PANAMA**: 3 males, OSUC 202560 (AEIC); OSUC 232813, 319210 (TAMU). **VENEZUELA**: 2 males, OSUC 376076–376077 (MIZA).

### *Chromoteleia dispar* Chen & Masner, sp. n.

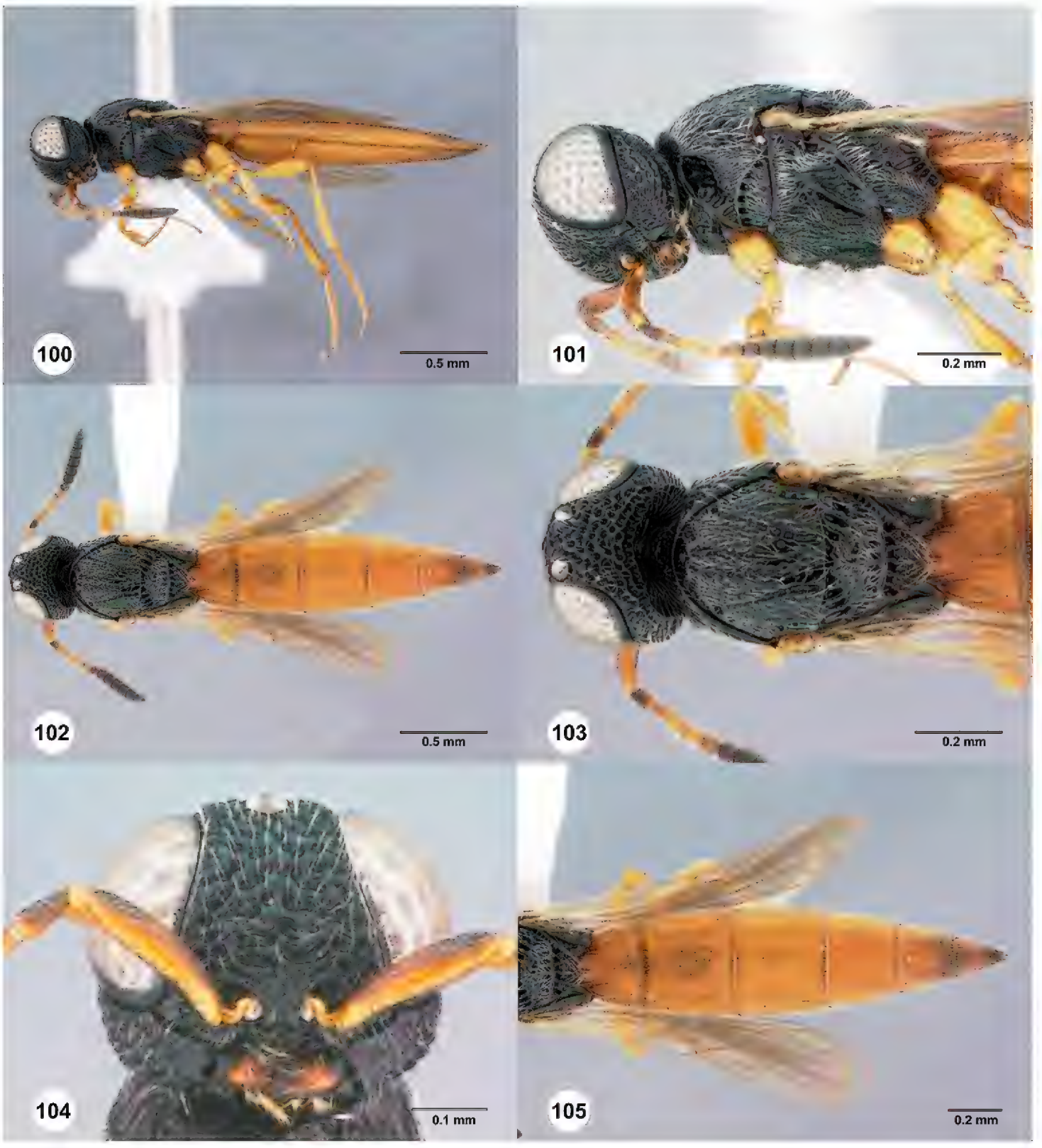
http://zoobank.org/C811B539-CFDC-4A2E-8EB7-D9664F889DC7
http://bioguid.osu.edu/xbiod_concepts/318239
Figures 100–105

**Description.** Body length of female: 4.88–5.50 mm (n = 20). Body length of male: 4.60–5.29 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: as long as wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: absent. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: coarsely punctate rugose.

Color of mesosoma: black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: two rows of foveate grooves along median mesoscutal carina anteriorly, smooth at posterior margin. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: areolate. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: orange. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: sparse. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: longitudinally punc-




**Figures 100–105.** *Chromoteleia dispar* sp. n., female, holotype (OSUC 190774). **100** Lateral habitus **101** Head and mesosoma, lateral view **102** Dorsal habitus **103** Head and mesosoma, dorsal view **104** Head, anterior view **105** Metasoma, dorsal view.

tate rugose. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: smooth to coriaceous. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be easily distinguished by the orange female metasoma, the lack of central keel, and the two rows of foveate grooves along median mesoscutal carina anteriorly.

**Etymology.** The epithet is inspired by the Latin word for different, in reference to the different colors of metasoma between female and male, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id = 318239]

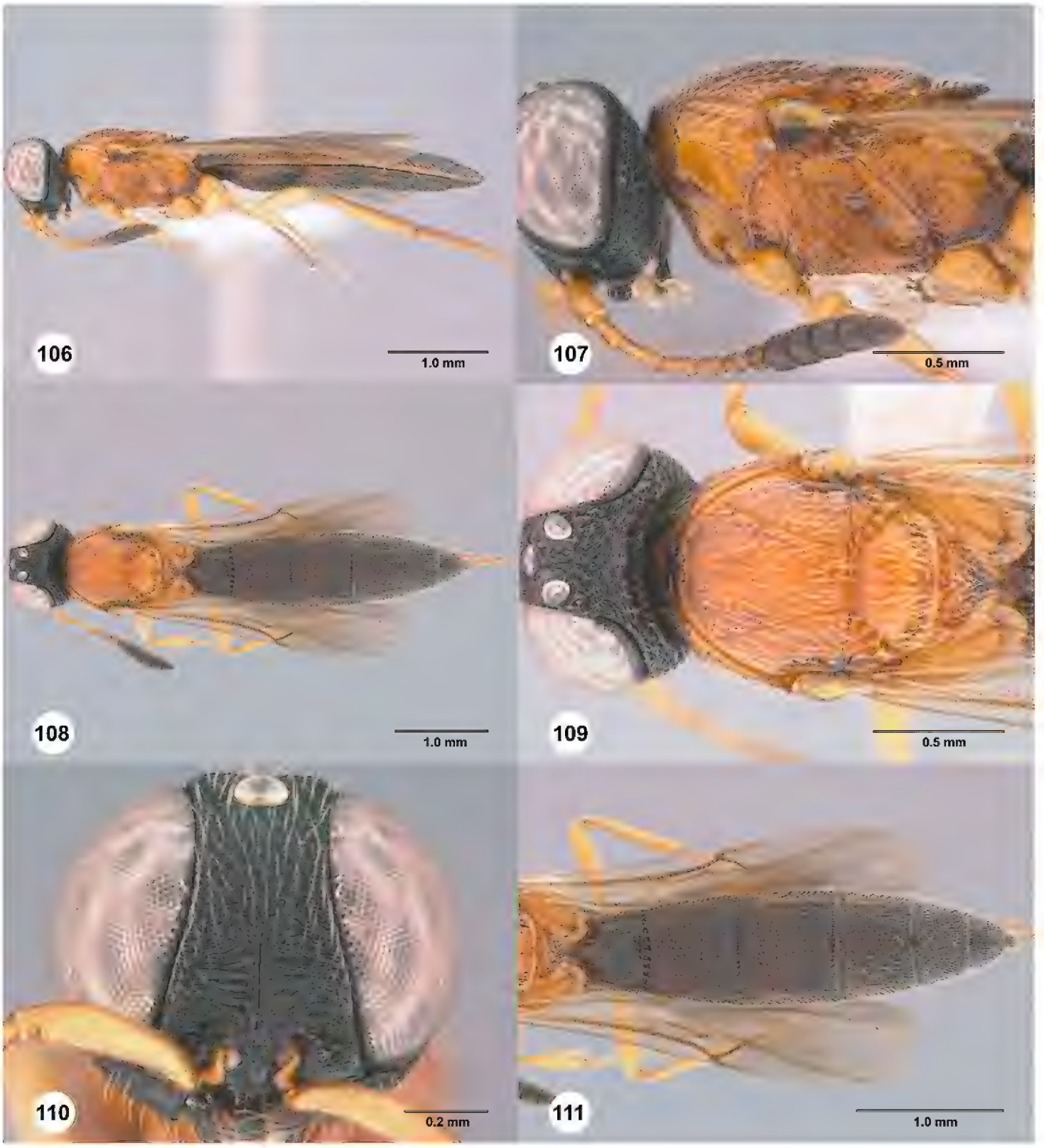
**Material examined.** Holotype, female: **COLOMBIA**: Magdalena Dept., Zaino, M.567, 50 m, 11°20'N, 74°02'W, Tayrona Natural National Park, 28.VII–14. VIII.2000, Malaise trap, R. Henriquez, OSUC 190774 (deposited in IAVH). *Paratypes*: (22 females, 28 males) **COLOMBIA**: 11 females, 17 males, OSUC 586769–586770 (CNCI); OSUC 151957–151959, 151961, 152023, 170413, 190080, 190082, 190773 (IAVH); OSUC 151960, 152020, 152022, 170414, 190081, 223860, 223866 (OSUC); OSUC 223857–223859, 223861–223865, 223867–223868 (USNM). **VENEZUELA**: 11 females, 11 males, OSUC 577442–577443, 577446–577448 (CNCI); OSUC 237132, 377646 (MIZA); OSUC 237133–237135, 271022–271028, 577441, 577445, 586469 (OSUC); OSUC 221940 (TAMU); OSUC 577444 (USNM).

### *Chromoteleia feng* Chen & Johnson, sp. n.

http://zoobank.org/A252B7DB-459E-44BB-97A8-72AC6EC76161
http://bioguid.osu.edu/xbiod_concepts/452223
Figures 106–111

**Description.** Body length of female: 4.48–5.15 mm (n = 20). Body length of male: 4.30–5.12 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: smooth. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: smooth. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: striate to densely punctate below mesopleural carina, otherwise smooth. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent.




**Figures 106–111.** *Chromoteleia feng* sp. n., female, holotype (OSUC 233344). **106** Lateral habitus **107** Head and mesosoma, lateral view **108** Dorsal habitus **109** Head and mesosoma, dorsal view **110** Head, anterior view **111** Metasoma, dorsal view.

Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: absent; present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6

in female: approximately as long as wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: present. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: densely punctate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. robusta* in the acute T6 apex, but it can be distinguished by the combination of the following characters: female A12 has only one basiconic sensillum, occipital carina complete, notaulus smooth.

**Etymology.** The epithet is inspired by the Chinese word 锋 (fēng) for the name of the sharp point of a spear, in reference to the pointed female T6, and is intended to be treated as a noun.

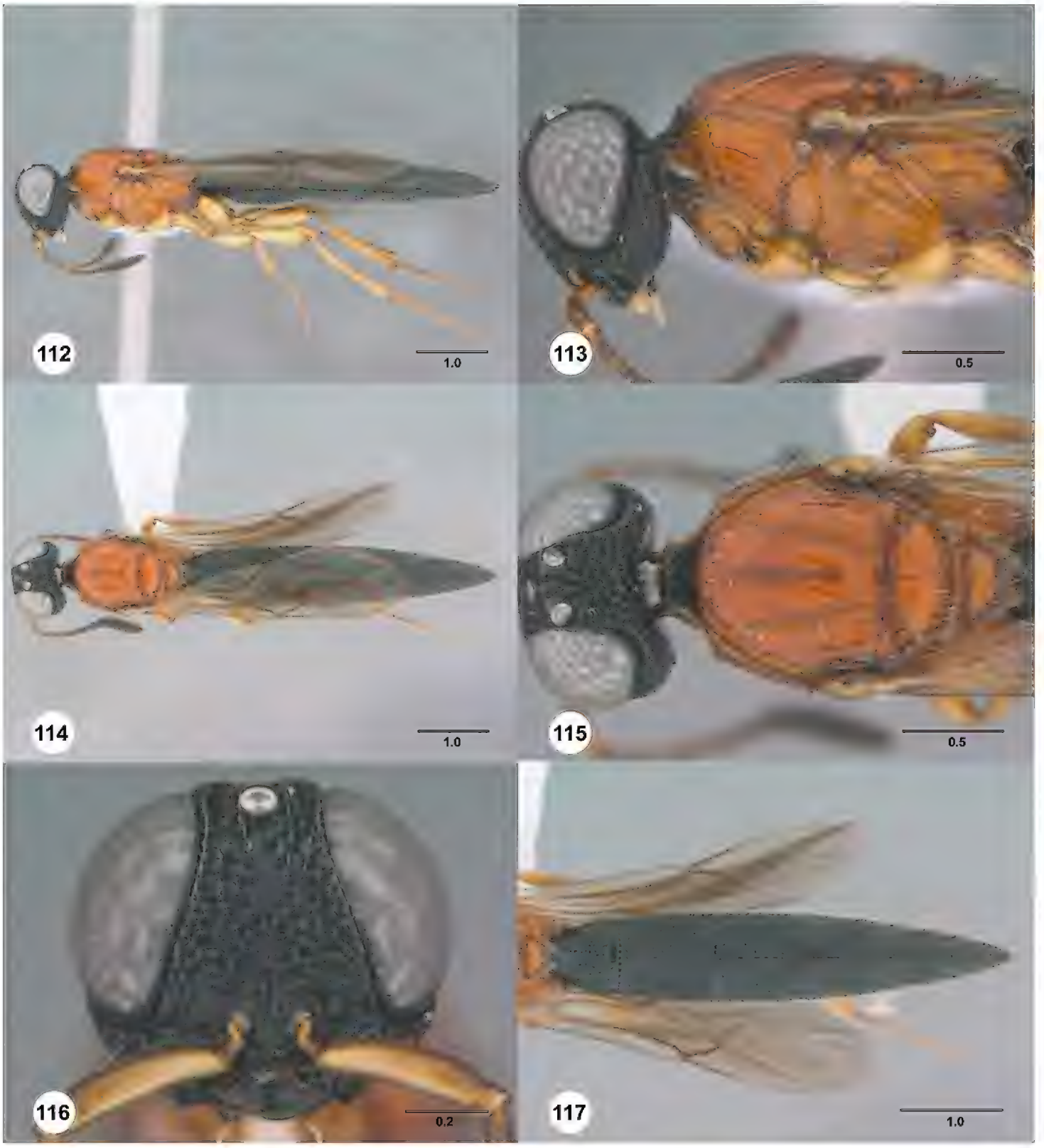
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=318239]

**Material examined.** Holotype, female: **BRAZIL**: PA, Melgaço Mpio., Ferreira Penna Scientific Station, trail, P05057, 01°44'28"S, 51°27'21.3"W, Caxiuanã, 16.XI–19.XI.2003, yellow pan trap, A. P. Aguiar & J. Dias, OSUC 233344 (deposited in MPEG). *Paratypes*: (24 females, 92 males) **BRAZIL**: 16 females, 90 males, OSUC 202483, 202487, 202518, 202520–202521, 202526–202527 (AEIC); OSUC 584166–584170, 584176, 586360, 586363–586364, 586366–586367, 586370, 586372 (CNCI); OSUC 185794, 185832, 185834–185835, 185837, 185839, 185841, 225228–225229, 225233, 231866, 231868, 231870, 231872–231873, 231886, 241252, 241254, 241256, 241279, 322168, 322170, 322172, 322176, 322594, 322596, 322600, 326258, 326260, 359052, 359058, 359066, 359078, 380236–380237, 380240, 449170, 449174, 449177 (MPEG); OSUC 166091, 185792, 185795, 185833, 185836, 185838, 185840, 225222, 225226, 225231, 225238, 231867, 231869, 231871, 231874, 233120, 233293, 241251, 241255, 241257, 254999, 322167, 322169, 322174, 322202, 322595, 322597, 322640, 326259, 359054–359055, 359060, 359070, 359074, 366730, 371944, 380235, 380238, 380241, 381993, 449166, 449173, 449175–449176, 449182 (OSUC); OSUC 225301, 225310 (USNM). **FRENCH GUIANA**: 7 females, 2 males, OSUC 555821, 586223–586224, 586226–586227, 586231, 586829, 586852, 586858 (CNCI). **VENEZUELA**: 1 female, OSUC 557019 (CNCI).

### *Chromoteleia fossa* Chen & Johnson, sp. n.

http://zoobank.org/06CBBAC3-7C54-4A69-9395-ED4B55E67D7D
http://bioguid.osu.edu/xbiod_concepts/452226
Figures 112–117

**Description.** Body length of female: 6.90 mm (n = 1). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex:




**Figures 112–117.** *Chromoteleia fossa* sp. n., female, holotype (OSUC 320582). **112** Lateral habitus **113** Head and mesosoma, lateral view **114** Dorsal habitus **115** Head and mesosoma, dorsal view **116** Head, anterior view **117** Metasoma, dorsal view.

absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose; narrowly smooth ventrally, punctate rugose dorsally.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: smooth. Median mesoscutal

carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: striate to densely punctate below mesopleural carina, otherwise smooth. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. feng* with which it shares the characters of smooth notaulus and female A12 with one basiconic sensillum, but it can be distinguished by the combination of the following characters: female T6 without apical spine, occipital carina interrupted medially.

**Etymology.** The epithet is inspired by the Latin word for ditch, in reference to the smooth notaulus, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452226]

**Material examined.** Holotype, female: **PANAMA**: Kuna Yala Comarca, 2001/038, 390 m, 09°20'31"N, 78°59'38"W, Nusagandi Station, 12.I–15.I.2001, yellow pan trap, M. Yoder, OSUC 320582 (deposited in TAMU).

### *Chromoteleia fuscicornis* Kieffer

http://zoobank.org/FFE02947-921E-4224-971E-7C0259A61634
http://bioguid.osu.edu/xbiod_concepts/4213
Figures 22, 23, 25, 118–127

*Chromoteleia fuscicornis* Kieffer, 1910a: 313, 316 (original description, keyed); Masner, 1976: 25 (description, type information); Johnson, 1992: 364 (cataloged, type information).

*Petalosema fuscicornis* (Kieffer): Kieffer, 1926: 358, 360 (generic transfer, description, keyed).

**Description.** Body length of female: 4.28–6.90 mm (n = 20). Body length of male: 4.10–6.53 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly wider

than long. A5 in female: distinctly longer than wide; as long as wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: sparsely punctate. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: smooth. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange to pale brown. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

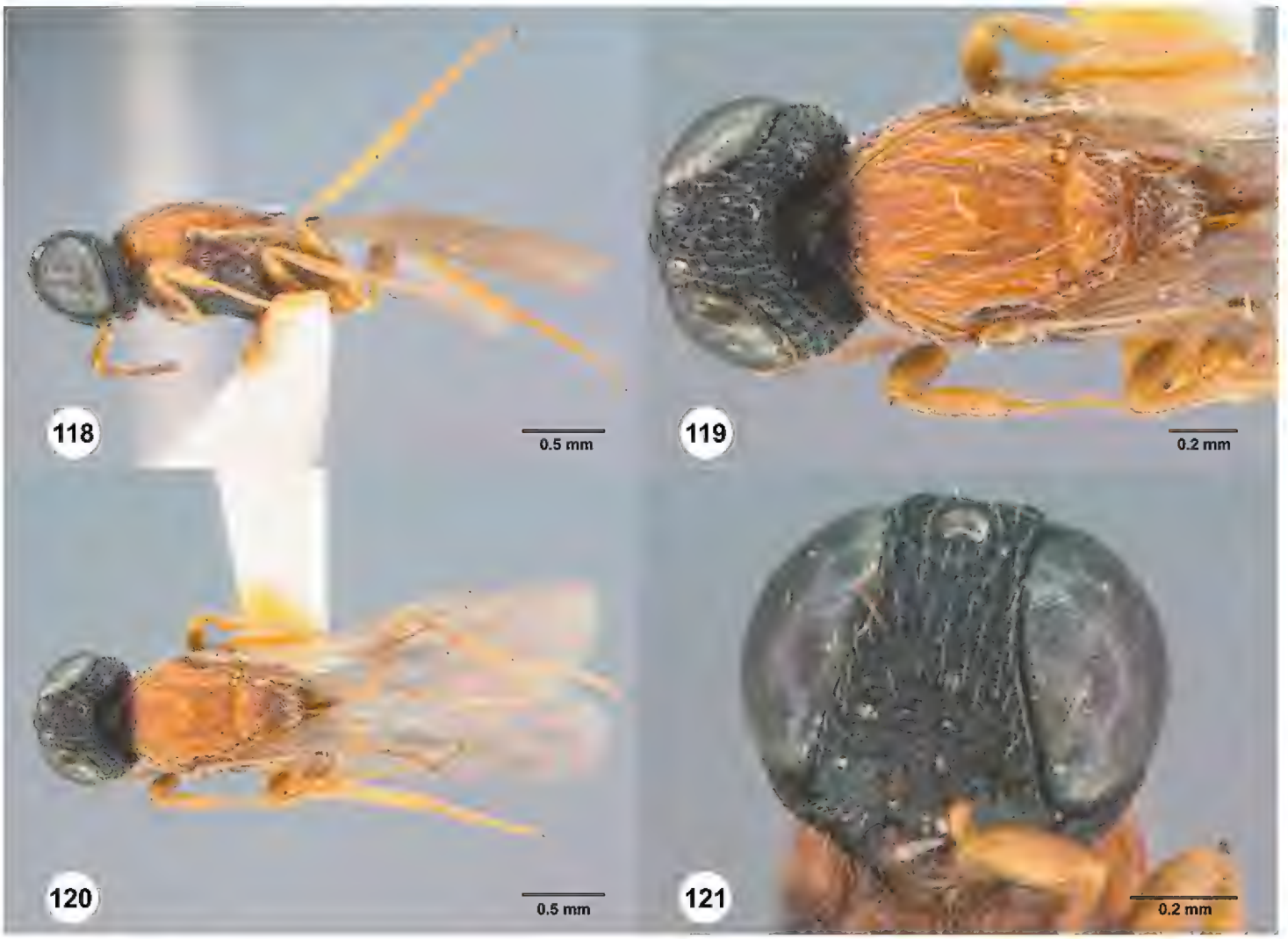
Length of postmarginal vein: distinctly shorter than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: absent. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: smooth anteriorly, rugulose posteriorly. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* by the following combination of characters: female A7 with one basiconic sensillum, dorsal metapleural area with setae, basitarsus distinctly longer than remaining segments combined, postmarginal vein distinctly shorter than stigmal vein, male T7 with posterior margin deeply emarginate medially between rounded projections.

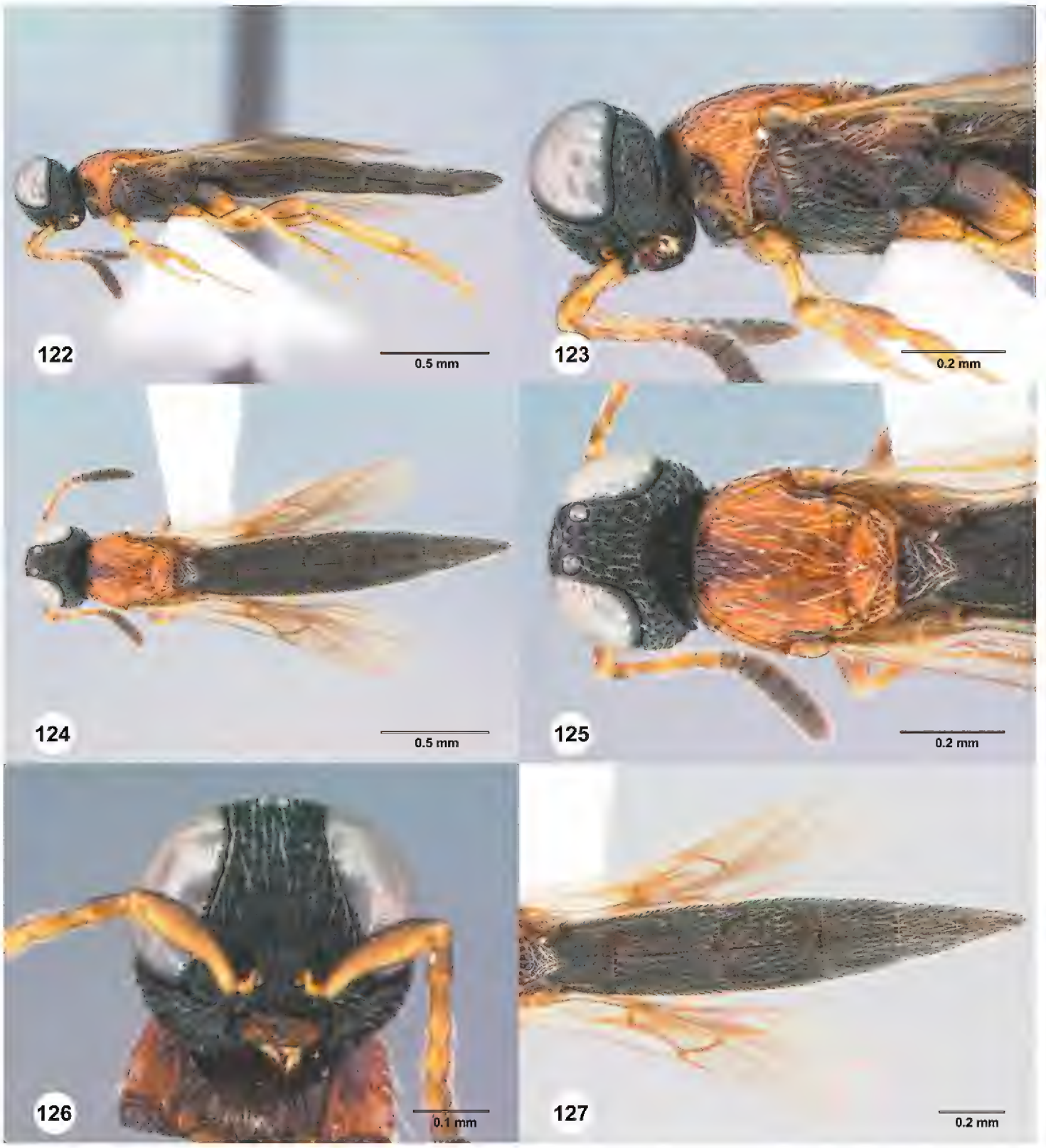
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4213]

**Material examined.** Holotype, female: **BRAZIL**: PA, no date, Baker, CAS TYPE9649 (deposited in CAS).




**Figures 118–121.** *Chromoteleia fuscicornis* Kieffer, female, holotype (CAS TYPE9649). **118** Lateral habitus **119** Head and mesosoma, lateral view **120** Dorsal habitus **121** Head, anterior view.

**Other material**: (164 females, 155 males) **BELIZE**: 1 female, OSUC 577461 (CNCI). **BOLIVIA**: 2 females, OSUC 586776–586777 (CNCI). **BRAZIL**: 45 females, 78 males, OSUC 149647, 202479–202481, 202484, 202486, 202489, 202491, 202494 (AEIC); OSUC 577932, 583469, 583472, 583494, 583497, 583503, 584147–584148, 584150–584151, 584154–584156, 584160, 584324, 584327–584329, 584335, 586129, 586133, 586147, 586303, 586314–586315, 586329, 586369, 586371, 586393, 586400–586403, 586416–586417, 586573, 586788–586795 (CNCI); OSUC 199636 (FSCA); OSUC 185793, 185831, 225230, 225587, 251722, 322601, 326463, 326475, 344379, 354649, 354653, 359053, 359071, 359075, 359077, 379217, 380234, 449167, 449171, 449185 (MPEG); OSUC 185796, 185842, 225224, 225234, 225585, 241249, 322171, 326261, 326464, 326476–326477, 344338, 344377, 354577, 354671, 354679, 359061–359062, 359069, 359072–359073, 366731, 374856, 380239, 380244, 449169, 449180, 449183, 56224, 56226, 56244–56247, 56249, 56251–56256, 56259 (OSUC); OSUC 204890, 204906–204907, 204988, 204992 (UCDC); OSUC 225316–225317 (USNM). **COLOMBIA**: 23 females, 11 males, OSUC 586306, 586346, 586762 (CNCI); OSUC 143900, 151956, 166454–166455, 166524, 189042, 189623, 190775, 191044, 230435, 232722, 273445, 320929 (IAVH); OSUC 143893, 151955, 166452, 166519, 166523, 166541, 170415, 182584, 190079, 190816,




**Figures 122–127.** *Chromoteleia fuscicornis* Kieffer, female (OSUC 584322). **122** Lateral habitus **123** Head and mesosoma, lateral view **124** Dorsal habitus **125** Head and mesosoma, dorsal view **126** Head, anterior view **127** Metasoma, dorsal view.

191293, 193459, 232725, 249927, 267217, 269374, 269376, 321675 (OSUC). COSTA RICA: 3 females, OSUC 556987, 557081, 586411 (CNCI). **ECUADOR**: 61 females, 38 males, OSUC 149650 (AEIC); OSUC 556943, 557031, 557033, 557035, 557038–557039, 557090, 557095, 583706, 583708, 583753, 584060, 584098, 584102–584103, 584112, 584114–584117, 584119, 584131, 584133, 584398, 584400, 584404, 584407, 584409, 584414, 584428–584429, 584431, 584759–584762, 585099–585105, 585107–585108, 585110–585118, 585120, 586159–586160, 586177, 586316, 586330, 586334, 586336, 586342, 586412,

586502–586503, 586505, 586554, 586667, 586694–586695, 586708, 586714, 586724, 586731 (CNCI); DPI_FSCA 00010220 (CSCA); OSUC 199630 (FSCA); OSUC 557032, 557041, 557089, 557097, 584083, 584097, 584104, 584113, 584118, 584402, 584410, 585109, 585119, 586331, 586333, 586531, 586727 (OSUC); OSUC 221926–221927 (TAMU); OSUC 204994, 204997 (UCDC). **FRENCH GUIANA**: 6 females, 4 males, OSUC 586233, 586243, 586246, 586256, 586433, 586828, 586849, 586857, 586862, 586864 (CNCI). **PERU**: 18 females, 24 males, OSUC 556970, 578055, 578061, 584309, 584311–584313, 584318–584319, 584321–584322, 586138, 586189, 586440, 586572, 586797–586801, 586803–586804, 586866 (CNCI); DPI_FSCA 00010216–00010219, 00010221–00010224 (CSCA); OSUC 199609 (FSCA); DPI_FSCA 00010225–00010226, SM0267120 (KUNH); OSUC 181564, 323995, 584320, 586802, 586807 (OSUC); OSUC 204984–204985 (UCDC). **SURINAME**: 2 females, OSUC 557085, 584297 (CNCI). **VENEZUELA**: 3 females, OSUC 586157, 586470, 586472 (CNCI).

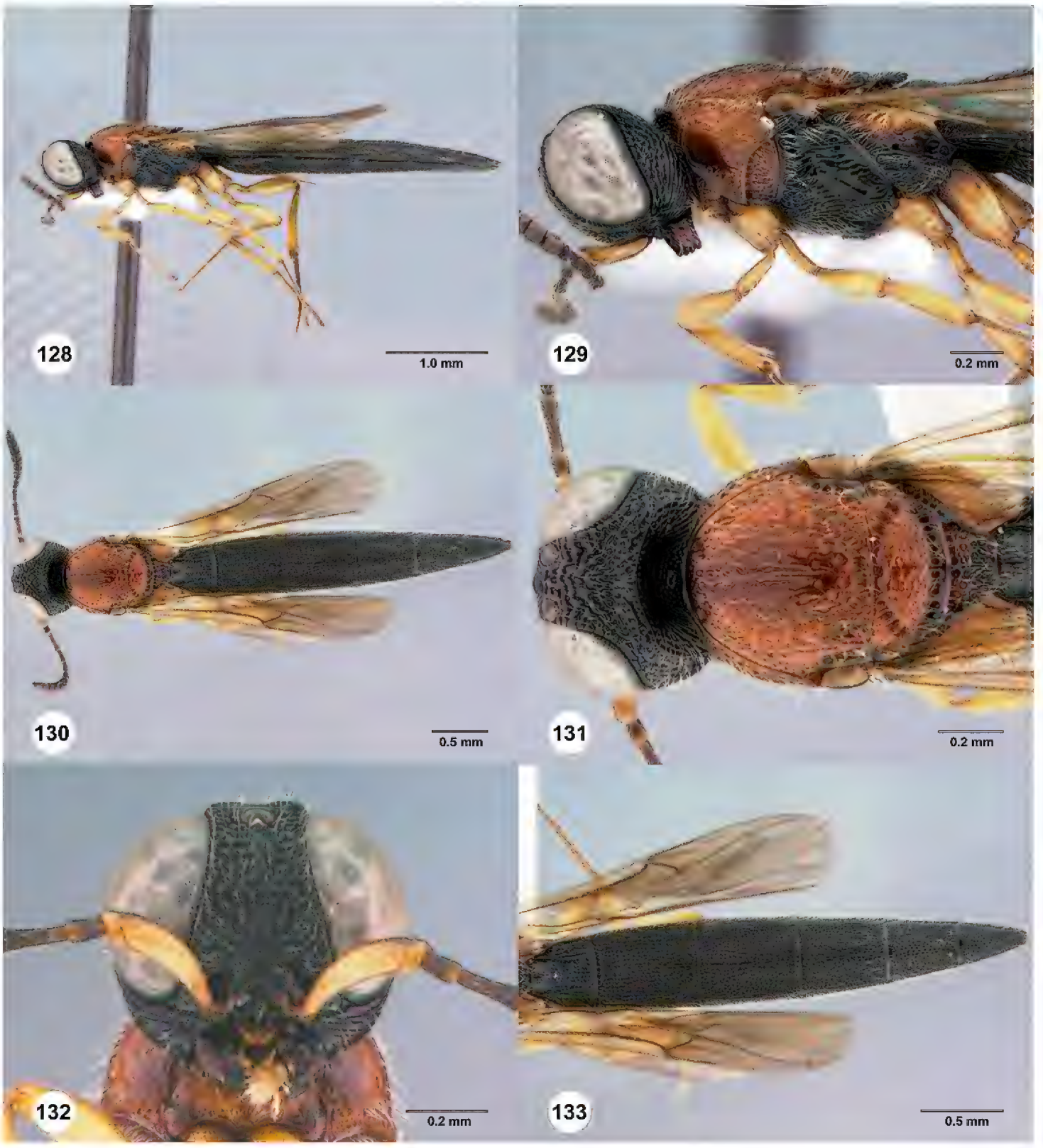
### *Chromoteleia ingens* Chen & Masner, sp. n.

http://zoobank.org/0CF0DEE6-E009-4EAE-9723-FC456357CBFC
http://bioguid.osu.edu/xbiod_concepts/452212
Figures 9, 128–133

**Description.** Body length of female: 8.78–9.20 mm (n = 6). Body length of male: 7.60–7.83 mm (n = 4). Color of A1: yellow to orange. A6 in female: distinctly longer than wide. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: smooth.

Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: sparsely punctate. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area:




**Figures 128–133.** *Chromoteleia ingens* sp. n., female, holotype (OSUC 577500). **128** Lateral habitus **129** Head and mesosoma, lateral view **130** Dorsal habitus **131** Head and mesosoma, dorsal view **132** Head, anterior view **133** Metasoma, dorsal view.

rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: orange yellow to brown, with tarsi darker. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of

T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: longitudinally punctate rugose. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: smooth to coriaceous. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. longitarsis*, but it can be distinguished by the combination of the following characters: female A12 has two basiconic sensilla, and occipital carina complete.

**Etymology.** The epithet is inspired by the Latin word for huge, in reference to the large body size of this species, and is intended to be treated as an adjective.

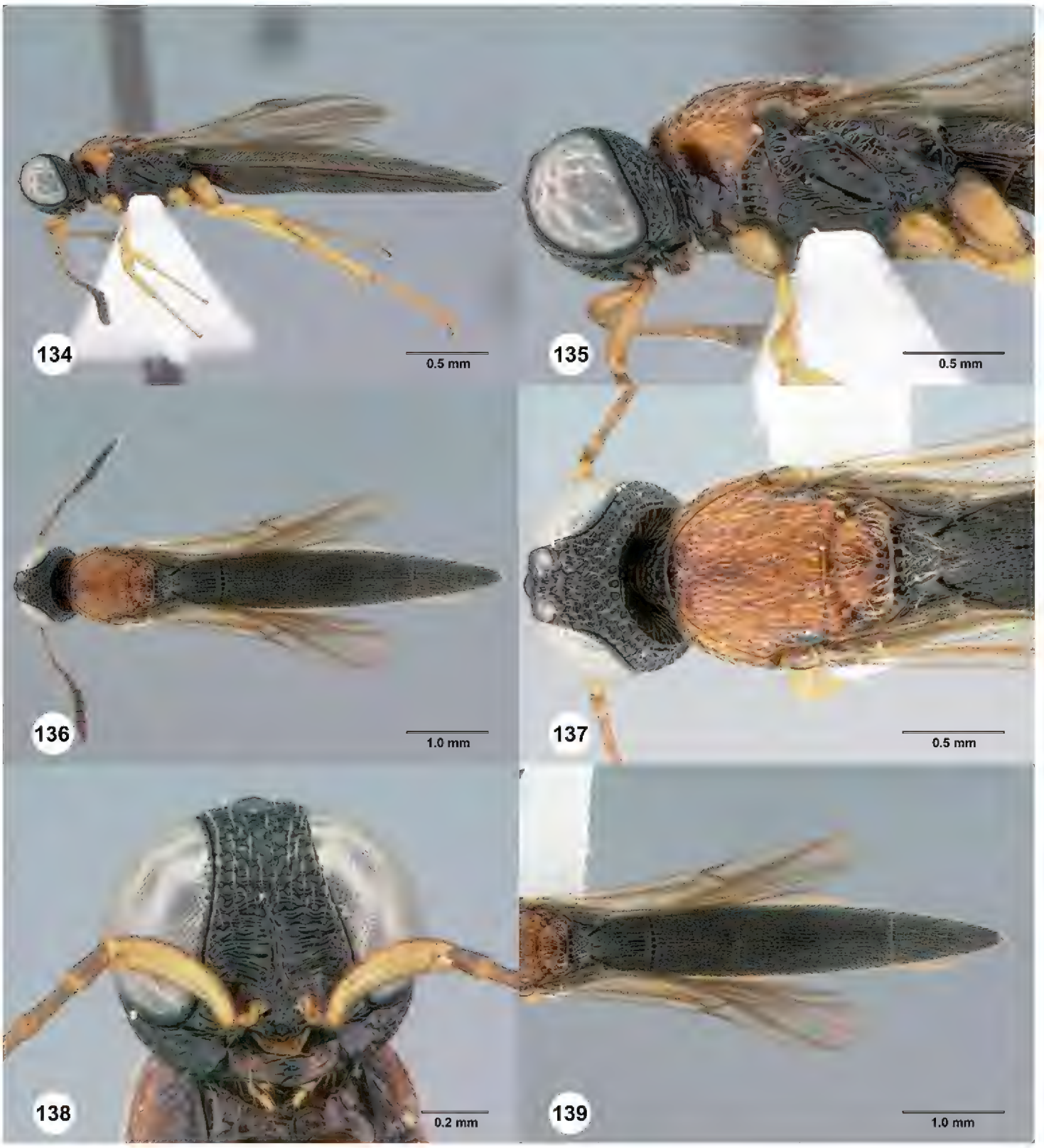
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452212]

**Material examined.** Holotype, female: **ECUADOR**: Orellana Prov., Yasuní Scientific Research Station (YSRS), 220m, 00.67°S 76.39°W, Yasuní National Park, 18.V–27.V.1990, P. Hibbs, OSUC 577500 (deposited in CNCI). *Paratypes*: (5 females, 4 males) **BRAZIL**: 4 females, 4 males, OSUC 149636, 202473–202478 (AEIC); OSUC 583458 (CNCI). **ECUADOR**: 1 female, OSUC 577499 (CNCI).

***Chromoteleia levitas* Chen & Johnson, sp. n.**
http://zoobank.org/F5087C96-A2E3-420E-B28F-7089D61A20A4
http://bioguid.osu.edu/xbiod_concepts/452159
Figures 134–139

**Description.** Body length of female: 5.68–6.60 mm (n = 20). Body length of male: 4.60–5.10 mm (n = 8). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: punctate rugose dorsally and ventrally, strigose medially.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: punctate rugose anteriorly, smooth posteriorly. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: smooth. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscu-




**Figures 134–139.** *Chromoteleia levitas* sp. n., female, holotype (OSUC 577476). **134** Lateral habitus **135** Head and mesosoma, lateral view **136** Dorsal habitus **137** Head and mesosoma, dorsal view **138** Head, anterior view **139** Metasoma, dorsal view.

tellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: largely smooth, punctate rugose anteriorly and directly below femoral depression. Sculpture of dorsal metapleural area: rugose; smooth. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose throughout; rugose anteriorly, smooth

posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: densely punctate. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. rara*, but it can be distinguished by the combination of the smooth notaulus smooth and striate A1.

**Etymology.** The epithet is inspired by the Latin word for smoothness, in reference to the mostly smooth metapleuron, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452159]

**Material examined.** Holotype, female: **BRAZIL**: RO, 62 km S Ariquemes, Rancho Grande Farm, 12.XI–22.XI.1991, E. M. Fisher, OSUC 577476 (deposited in CNCI). *Paratypes*: (43 females, 8 males) **BRAZIL**: 21 females, 5 males, OSUC 149642, 202510 (AEIC); OSUC 577471–577474, 577477, 577479–577482, 584157–584158, 584331–584333 (CNCI); OSUC 354579, 380243 (MPEG); OSUC 577475, 577478, 577483, 584153, 584326 (OSUC); OSUC 225307–225308, 225311 (USNM). **COLOMBIA**: 5 females, OSUC 143982, 193662 (IAVH); OSUC 228672, 269686, 274926 (OSUC). COSTA RICA: 1 female, OSUC 584243 (CNCI). **ECUADOR**: 7 females, 2 males, OSUC 585091–585096, 585098, 586529 (CNCI); OSUC 586530 (OSUC). **FRENCH GUIANA**: 6 females, OSUC 555802, 555817, 555820, 555822, 586853 (CNCI); OSUC 555823 (OSUC). **PERU**: 2 females, 1 male, OSUC 584306, 584317 (CNCI); OSUC 320746 (USNM). **SURINAME**: 1 female, OSUC 584296 (CNCI). *Other material*: **PERU**: 1 female, 1 male, SEMC0983802, SEMC0985301T (KUNH).

### *Chromoteleia longitarsis* Kieffer

http://zoobank.org/17954F24-A488-4D04-99FE-12F22370E2C1
http://bioguid.osu.edu/xbiod_concepts/4214
Figures 16–17, 27, 140–151, 236

*Chromoteleia longitarsis* Kieffer, 1910a: 313, 314 (original description, keyed); Masner, 1976: 25 (type information); Johnson, 1992: 364 (cataloged, type information).
*Petalosema longitarsis* (Kieffer): Kieffer, 1926: 358, 359 (generic transfer, description, keyed).

**Description.** Body length of female: 6.88–7.20 mm (n = 20). Body length of male: 6.30–6.73 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly longer

than wide. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: rugose. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: densely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: smooth. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: pale yellow with tarsi dark brown to black. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

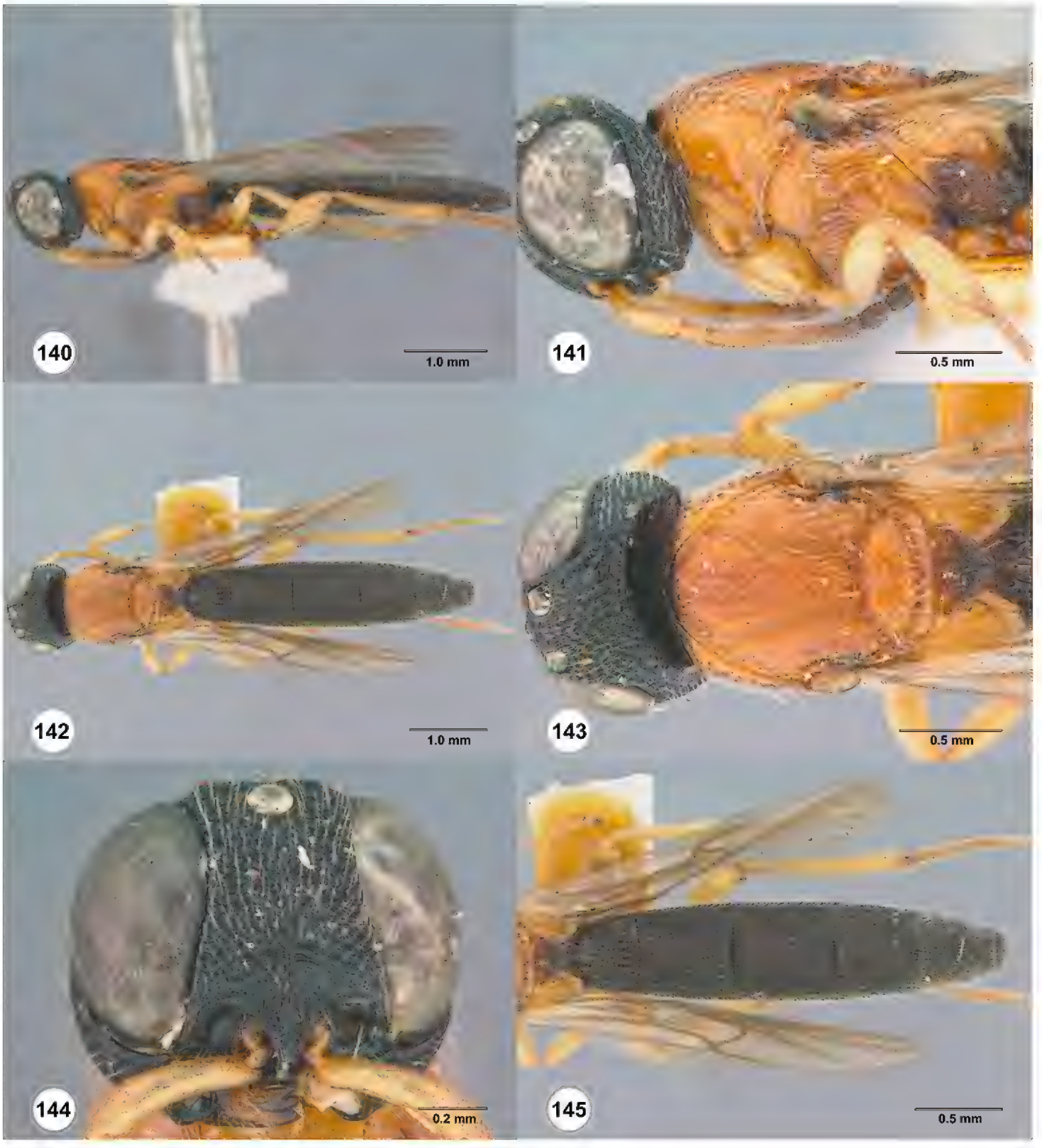
Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: absent. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: densely punctate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* species by the following combination of characters: female A7 without basiconic sensilla, dorsal metapleural area with setae, basitarsus distinctly longer than remaining segments combined, postmarginal vein distinctly longer than stigmal vein, male T7 with posterior margin straight.

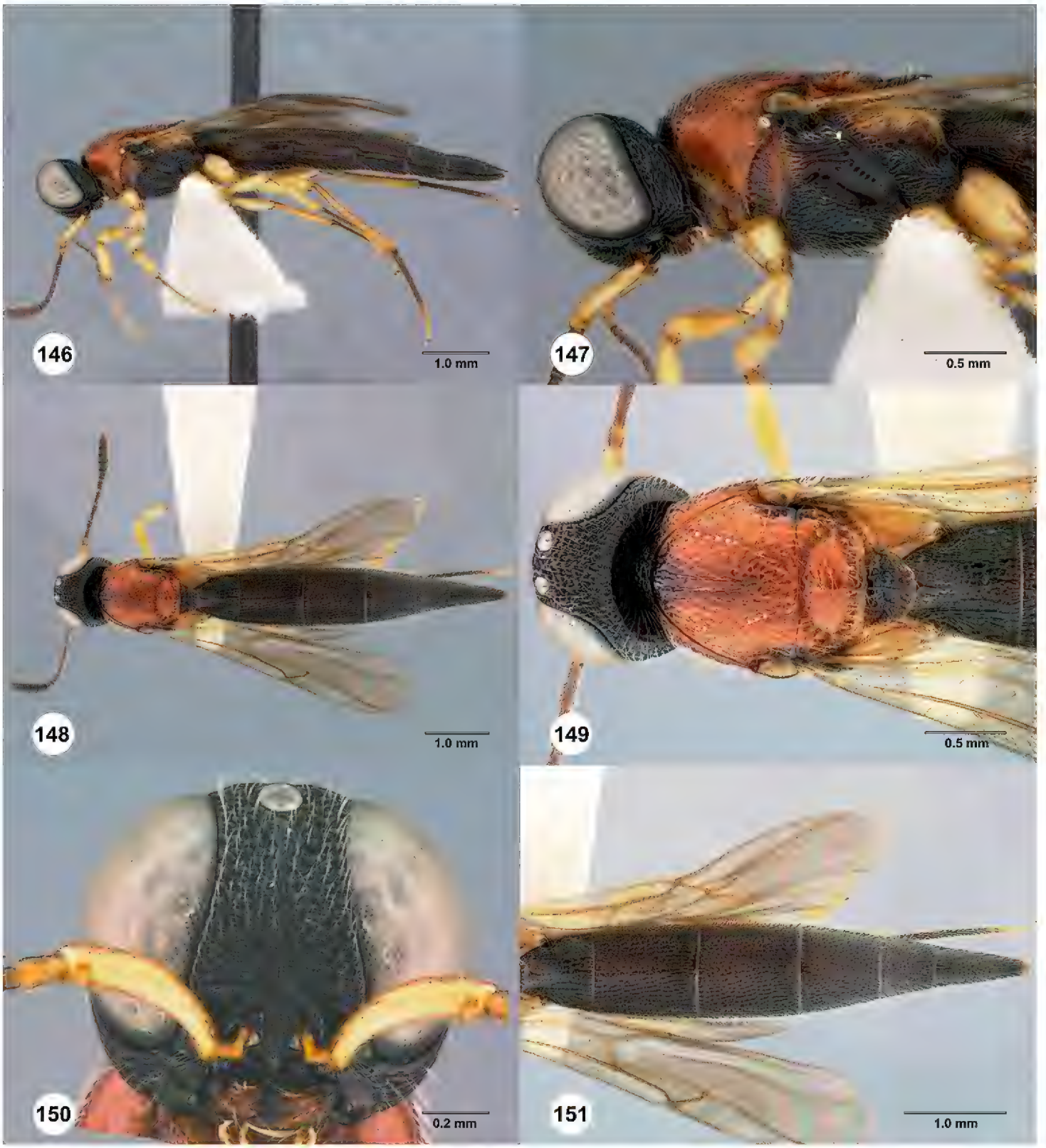
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4214]

**Material examined.** Holotype, male: **BRAZIL**: PA, no date, Baker, CAS TYPE9682 (deposited in CAS).




**Figures 140–145.** *Chromoteleia longitarsis* Kieffer, male, holotype (CAS TYPE9682). **140** Lateral habitus **141** Head and mesosoma, lateral view **142** Dorsal habitus **143** Head and mesosoma, dorsal view **144** Head, anterior view **145** Metasoma, dorsal view.

**Other material**: (84 females, 58 males) **BRAZIL**: 7 females, 6 males, OSUC 202525, 202528, 202531 (AEIC); OSUC 584895–584896, 584898–584901 (CNCI); OSUC 379215 (MPEG); OSUC 185791, 56242, 584897 (OSUC). **COLOMBIA**: 2 females, OSUC 193428 (IAVH); OSUC 253477 (OSUC). **COSTA RICA**: 57 females, 26 males, OSUC 583420, 583776, 584260, 584263, 584857–584864, 584866–584868, 584870–584874, 584876–584878, 584880–584887, 584889–584891, 584964–584969, 584971–584976, 584978–584980, 584982–584983, 584985–584986, 584988–584992, 584994–584999, 586751–586752,




**Figures 146–151.** *Chromoteleia longitarsis* Kieffer, female (OSUC 584896). **146** Lateral habitus **147** Head and mesosoma, lateral view **148** Dorsal habitus **149** Head and mesosoma, dorsal view **150** Head, anterior view **151** Metasoma, dorsal view.

586754, 586756, 586838, 586843 (CNCI); OSUC 584865, 584869, 584875, 584879, 584888, 584970, 584977, 584981, 584984, 584987, 584993, 585000, 586753 (OSUC). **ECUADOR**: 8 females, 1 male, OSUC 584892–584894, 584902, 584911–584912, 584919, 586528 (CNCI); DPI_FSCA 00010210 (CSCA). **FRENCH GUIANA**: 7 females, 11 males, OSUC 555803, 555806, 555808, 555810, 555812, 555816, 555818, 555824, 584913, 586239, 586424–586425, 586437, 586861 (CNCI); OSUC 555805, 555809, 555815, 586860 (OSUC). **PANAMA**: 2 males, OSUC 584380, 586755 (CNCI). **PERU**: 1 female,

OSUC 578056 (CNCI). **SURINAME**: 1 female, OSUC 584903 (CNCI). **TRINIDAD AND TOBAGO**: 1 female, 12 males, OSUC 584144, 584904–584910, 584914–584918 (CNCI).

### *Chromoteleia longa* Chen & Johnson, sp. n.

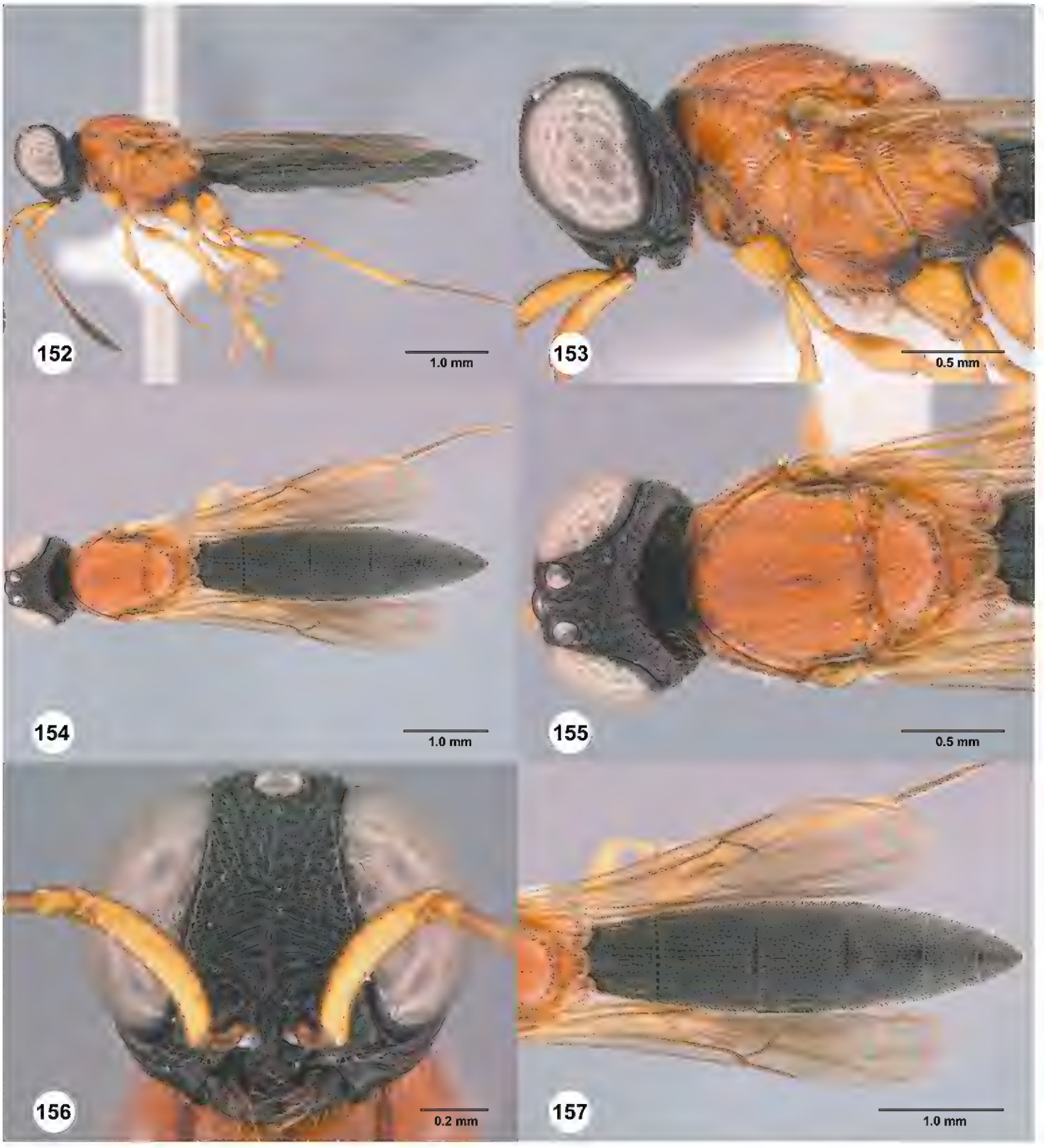
http://zoobank.org/1DB03949-CD59-4BC2-AD82-1DCFFA974FEB
http://bioguid.osu.edu/xbiod_concepts/318200
Figures 5–6, 152–157

**Description.** Body length of female: 5.28–5.90 mm (n = 20). Body length of male: 5.10–5.83 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly longer than wide. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: striate to densely punctate below mesopleural carina, otherwise smooth. Sculpture of dorsal metapleural area: rugose; smooth. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: longitudinally punctate rugose. Sculpture of T6 in female: densely punctate and granulate. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: coriaceous anteri-




**Figures 152–157.** *Chromoteleia longa* sp. n., female, holotype (OSUC 188702). **152** Lateral habitus **153** Head and mesosoma, lateral view **154** Dorsal habitus **155** Head and mesosoma, dorsal view **156** Head, anterior view **157** Metasoma, dorsal view.

orly, densely punctate posteriorly. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. tricarinata*, but it can be distinguished by the combination of the following characters: female A6 distinctly longer than wide, female A12 with one basiconic sensillum, median mesoscutal carina present anteriorly.

**Etymology.** The epithet is inspired by the Latin word for long, in reference to the elongate antenna in female, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=318200]

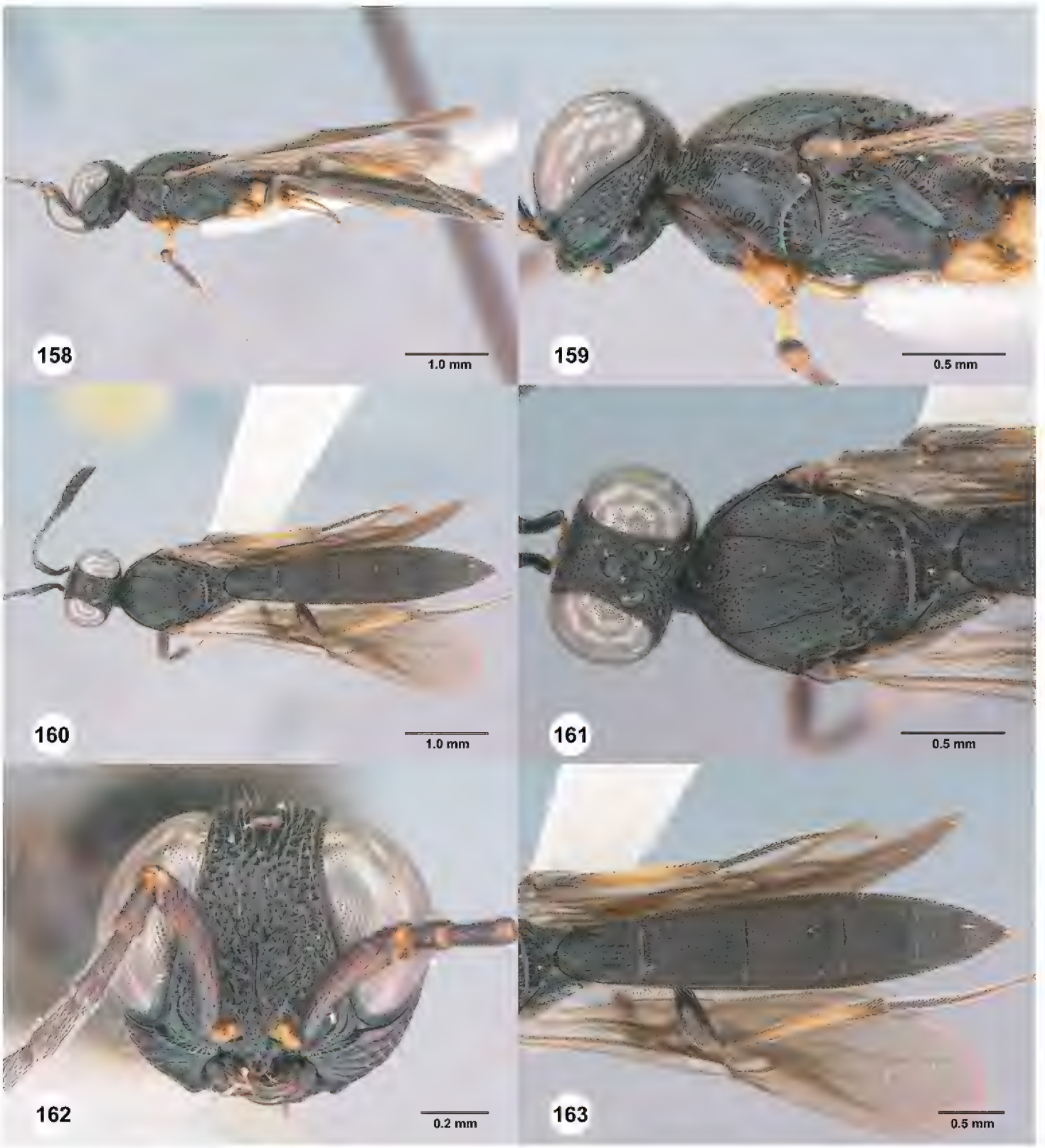
**Material examined.** *Holotype*, female: **COLOMBIA**: Chocó Dept., visitor's center, M.815, 2 m, 06°01'N, 77°20'W, Utría Natural National Park, 28.IX–15.X.2000, Malaise trap, J. Pérez, OSUC 188702 (deposited in OSUC). *Paratypes*: (49 females, 59 males) **BELIZE**: 14 females, OSUC 556959, 556961, 556963–556964, 556967, 556969, 586771, 586869 (CNCI); OSUC 556958, 556960, 556962, 556965, 556968, 586867 (OSUC). **COLOMBIA**: 5 females, 11 males, OSUC 199631–199632 (FSCA); OSUC 144297, 190807–190808, 190819–190821 (IAVH); OSUC 144296, 144298, 188703, 190809, 190817–190818, 190822, 269594 (OSUC). **COSTA RICA**: 19 females, 39 males, OSUC 577985, 578006, 578008, 578071, 583424–583428, 583430–583433, 583435, 583438, 583442, 583445–583447, 583450–583452, 583454–583457, 583716, 583765, 583784–583785, 583799–583813, 583816, 583976, 584229, 584252, 586392, 586450 (CNCI); OSUC 583439, 583441, 583443–583444, 583453, 583814–583815 (OSUC). **FRENCH GUIANA**: 1 male, OSUC 586438 (CNCI). **PANAMA**: 11 females, 8 males, OSUC 556948–556949, 556956, 584178, 584374, 584377, 586176, 586376, 586622, 586677–586678, 586818 (CNCI); OSUC 320583, 556952, 586621 (OSUC); OSUC 221924, 320584, 320641, 320643 (TAMU).

### *Chromoteleia maura* Chen & Masner, sp. n.

http://zoobank.org/0C29F53A-F881-4B25-9AA7-D2ABB704F172
http://bioguid.osu.edu/xbiod_concepts/452214
Figures 158–163

**Description.** Body length of female: 5.20 mm (n = 1). Color of A1: black. A6 in female: distinctly longer than wide. A5 in female: distinctly longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: densely punctate. Macrosculpture of lateral lobe of mesoscutum: densely punctate. Sculpture of notaulus: smooth. Median mesoscutal carina: present along full length of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of




**Figures 158–163.** *Chromoteleia maura* sp. n., female, holotype (OSUC 584757). **158** Lateral habitus **159** Head and mesosoma, lateral view **160** Dorsal habitus **161** Head and mesosoma, dorsal view **162** Head, anterior view **163** Metasoma, dorsal view.

mesepisternum below femoral depression: rugose anteriorly, sparsely punctate posteriorly. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose throughout. Color of legs: coxae and trochanters orange yellow, remainder of the legs dark brown. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly shorter than stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: dense. Transverse sulcus on T2: absent. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: present. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be easily distinguished by its black body, mostly dark brown legs, and smooth notaulus.

**Etymology.** The epithet is inspired by the Latin word for dark, in reference to the black body and legs, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452214]

**Material examined.** Holotype, female: **ECUADOR**: Napo Prov., 5 km S Baeza, 1700 m, 13.II.1983, Masner and Sharkey, OSUC 584757 (deposited in CNCI).

***Chromoteleia parvitas*** **Chen & Johnson, sp. n.**
http://zoobank.org/0EC98684-75B3-4609-BB53-9C64BC234AC9
http://bioguid.osu.edu/xbiod_concepts/452227
Figures 3–4, 164–169

**Description.** Body length of female: 3.38–3.65 mm (n = 5). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: coarsely punctate rugose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: flat. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Sculpture of mesepisternum below femoral depression: punctate rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present.

**Figures 164–169.** *Chromoteleia parvitas* sp. n., female, holotype (OSUC 586341). **164** Lateral habitus **165** Head and mesosoma, lateral view **166** Dorsal habitus **167** Head and mesosoma, dorsal view **168** Head, anterior view **169** Metasoma, dorsal view.

Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly shorter than stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long

as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. curta*, but it can be distinguished by the combination of the following characters: A5 in female as long as wide, postmarginal vein distinctly shorter than stigmal vein, female T1 horn absent.

**Etymology.** The epithet is inspired by the Latin word for small, in reference to the small body size of this species, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452227]

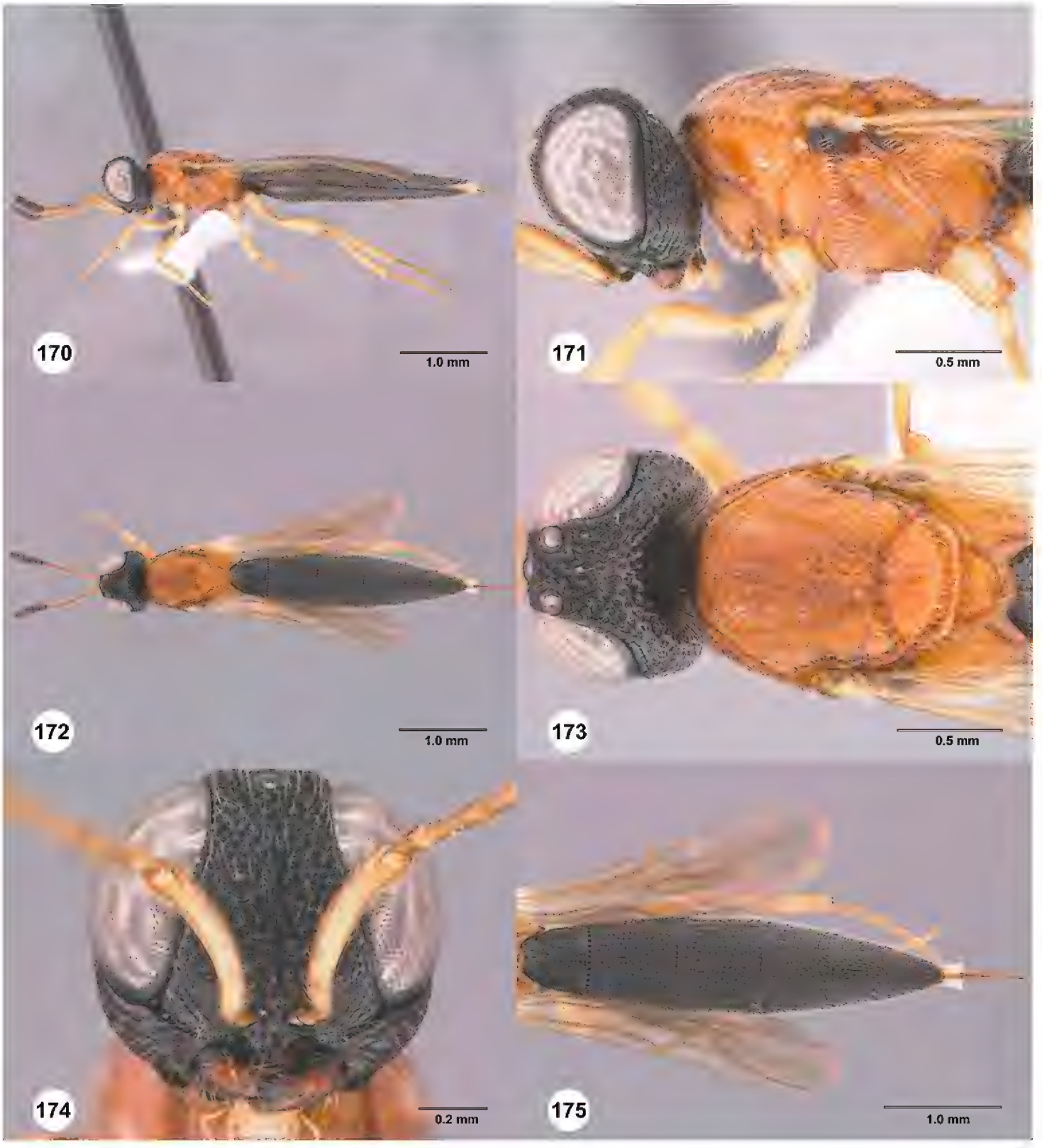
**Material examined.** Holotype, female: **ECUADOR**: Sucumbíos Prov., Limoncocha, 250 m, 15.VI–28.VI.1976, S. Peck & J. Peck, OSUC 586341 (deposited in CNCI). *Paratypes*: (4 females) **BRAZIL**: 1 female, OSUC 584163 (CNCI). **COLOMBIA**: 2 females, OSUC 584303 (IAVH); OSUC 276182 (OSUC). **ECUADOR**: 1 female, OSUC 583752 (CNCI).

### *Chromoteleia pilus* Chen & Johnson, sp. n.

http://zoobank.org/6A3CC03A-FB31-4C4B-8BD3-87C2F935D18C
http://bioguid.osu.edu/xbiod_concepts/452225
Figures 24, 170–175

**Description.** Body length of female: 4.98–5.90 mm (n = 20). Body length of male: 4.73–5.33 mm (n = 20). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: interrupted medially. Granulate microsculpture of vertex: present. Sculpture of occiput: rugose. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: discrete. Median mesoscutal carina: present along full length of mesoscutum; present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate throughout. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the meta-




**Figures 170–175.** *Chromoteleia pilus* sp. n., female, holotype (OSUC 584261). **170** Lateral habitus **171** Head and mesosoma, lateral view **172** Dorsal habitus **173** Head and mesosoma, dorsal view **174** Head, anterior view **175** Metasoma, dorsal view.

pleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punc-

tures in interstices. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: coriaceous anteriorly, densely punctate posteriorly. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. depilis* in color and size, but it can be distinguished by the combination of the following characters: dorsal metapleural area with setation, A6 in female as wide as long.

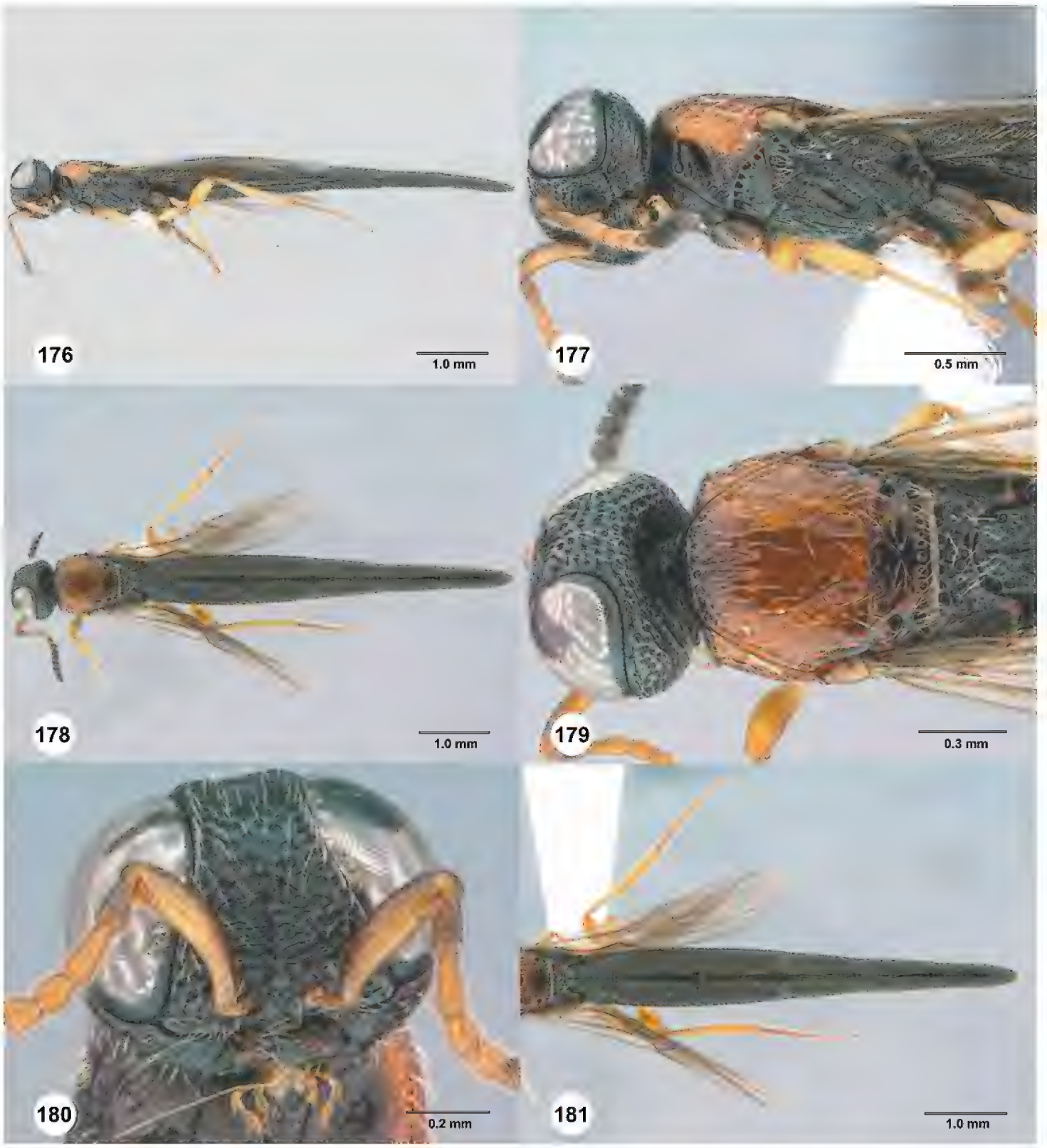
**Etymology.** The epithet is inspired by the Latin word for hair, in reference to the setose dorsal metapleuron, and is intended to be treated as a noun.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452225]

**Material examined.** Holotype, female: **COSTA RICA**: Puntarenas Prov., road to Rincón, 24 km W Pan-American Highway, 200 m, II-1989 – III-1989, Hanson & Gauld, OSUC 584261 (deposited in CNCI). *Paratypes*: (53 females, 31 males) **COSTA RICA**: 49 females, 31 males, OSUC 149651, 202550, 202553, 202555–202556, 203109 (AEIC); OSUC 556972, 556986, 556988, 556992, 557002, 557011–557012, 557049, 557061, 557083, 577903, 577907, 577933, 577935–577937, 577941, 577953, 577988, 578002–578004, 578058, 578082–578083, 578103, 583440, 583448, 583717, 583723, 583817, 583880, 583887, 583943–583944, 584032, 584035, 584037–584039, 584236, 584238, 584262, 586170, 586173, 586210, 586290, 586310, 586512, 586533, 586544, 586644, 586680, 586747, 586772, 586836 (CNCI); OSUC 202551, 202554, 556989, 557040, 56234, 578005, 578081, 578091, 583882, 583886, 583940, 584041, 584247, 586509, 586545, 586646, 586780 (OSUC); OSUC 221941 (TAMU). **MEXICO**: 1 female, OSUC 584145 (CNCI). **PANAMA**: 3 females, OSUC 584378, 584381, 586504 (CNCI).

***Chromoteleia plana* Chen & Johnson, sp. n.**
http://zoobank.org/DA401CB2-DCD9-405A-83AE-8159593A1510
http://bioguid.osu.edu/xbiod_concepts/452218
Figures 176–181

**Description.** Body length of female: 7.31 mm (n = 1). Color of A1: yellow to orange. A6 in female: distinctly wider than long. A5 in female: as long as wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: narrowly smooth ventrally, punctate rugose dorsally.




**Figures 176–181.** *Chromoteleia plana* sp. n., female, holotype (OSUC 577460). **176** Lateral habitus **177** Head and mesosoma, lateral view **178** Dorsal habitus **179** Head and mesosoma, dorsal view **180** Head, anterior view **181** Metasoma, dorsal view.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: sparsely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: sparsely punctate at anterior margin, smooth posteriorly. Macrosculpture of lateral lobe of mesoscutum: smooth. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly,

not extending to posterior margin of mesoscutum. Shape of mesoscutellum: strongly transverse. Mesoscutellum in lateral view: flat. Sculpture of mesoscutellum: smooth throughout. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: areolate. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: largely smooth, punctate rugose anteriorly and directly below femoral depression. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow with coxae dark brown. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices, with a narrow smooth strip medially. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of medial S2: punctate rugose, with a narrow smooth strip medially.

**Diagnosis.** This species can be easily distinguished by the following characters: body extremely elongate, central keel present only in ventral portion of frons, mesoscutellum strongly transverse, and T2–T6 with with a narrow smooth strip medially.

**Etymology.** The epithet is inspired by the Latin word for flat or plain, in reference to the flat and smooth mesoscutellum, and is intended to be treated as an adjective.

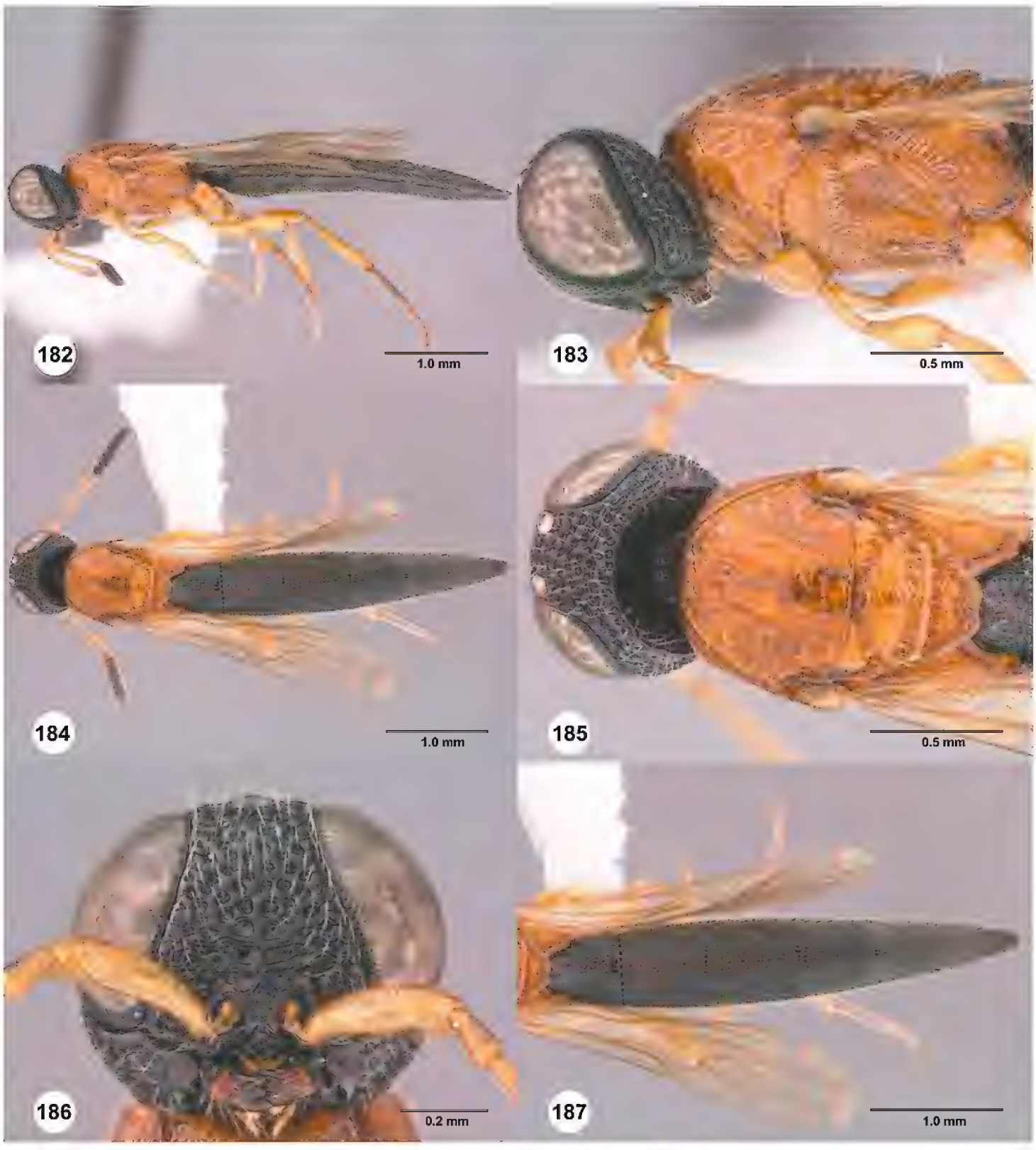
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id= 452218]

**Material examined.** Holotype, female: **FRENCH GUIANA**: Cayenne Arrond., 323 m, 04°33.998'N, 52°12.442'W, Kaw Mountains, 15.XII–18.XII.2011, Malaise trap, A. Desjardins, OSUC 577460 (deposited in CNCI).

### *Chromoteleia rara* Chen & Johnson, sp. n.

http://zoobank.org/0E7CB667-807C-4C4B-9858-BFE942BBAD19
http://bioguid.osu.edu/xbiod_concepts/452222
Figures 7–8, 182–187

**Description.** Body length of female: 4.68–5.30 mm (n = 20). Body length of male: 4.50–5.13 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 1; 2. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: present only in ventral portion of frons. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete.




**Figures 182–187.** *Chromoteleia rara* sp. n., female, holotype (OSUC 577495). **182** Lateral habitus **183** Head and mesosoma, lateral view **184** Dorsal habitus **185** Head and mesosoma, dorsal view **186** Head, anterior view **187** Metasoma, dorsal view. (NOTE: small form)

Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: densely punctate. Sculpture of notaulus: foveate. Notaular

foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: distinctly shorter than stigmal vein.

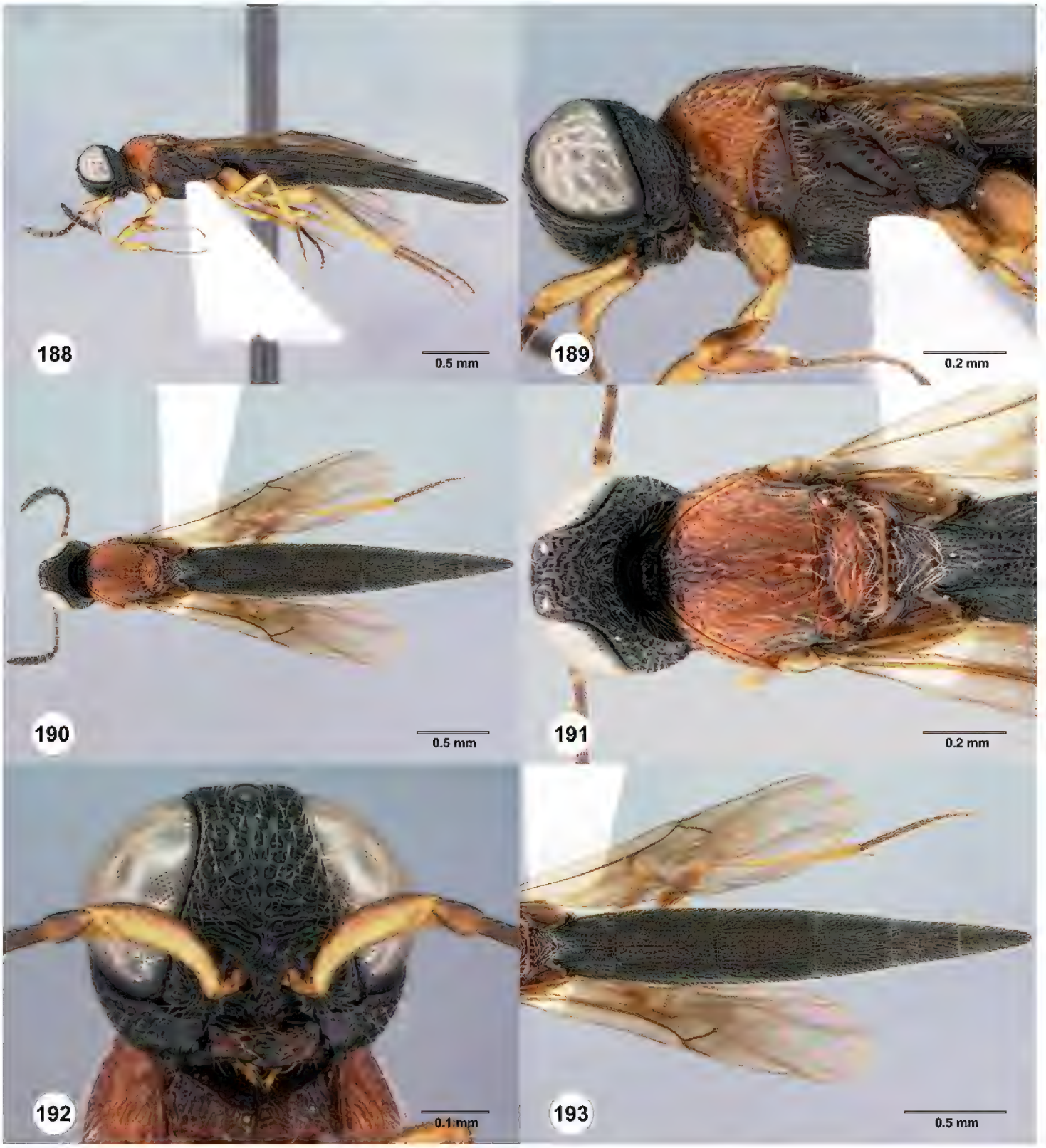
Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T7 in male: coriaceous anteriorly, densely punctate posteriorly. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. cuneus*, with which it shares a short postmarginal vein, and it can be distinguished by the rounded apex of T6 in dorsal view.

**Etymology.** The epithet is inspired by the Latin word for uncommon. We apply it to this species because this species is the only species in *Chromoteleia* that can have either one or two basiconic sensilla on A7. The name is treated as an adjective in apposition.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452222]

**Material examined.** Holotype, female: **COSTA RICA**: Heredia Prov., Puerto Viejo, La Selva Biological Station, 100 m, II.1993 – III.1993, Malaise trap, P. Hanson, OSUC 577495 (deposited in CNCI). *Paratypes*: (45 females, 28 males) **BELIZE**: 2 females, 1 male, OSUC 577509–577510 (CNCI); OSUC 93700 (OSUC). BRAZIL: 1 male, OSUC 586574 (CNCI). **COLOMBIA**: 3 females, OSUC 199606, 199612 (FSCA); OSUC 268912 (OSUC). **COSTA RICA**: 27 females, 17 males, OSUC 202552 (AEIC); OSUC 253964, 556978–556979, 556981, 557005–557006, 577489, 577491, 577493, 577904, 577906, 577945–577946, 577973, 577979, 577991, 578079, 578086, 583758, 583879, 583898, 583925, 583949, 584025, 584235, 586267, 586378, 586480, 586618, 586662, 586664 (CNCI); OSUC 556997, 577490, 577492, 577494, 577912, 577934, 577939, 577948, 584010, 586782, 586784 (OSUC); OSUC 204983 (UCDC). **ECUADOR**: 3 females, 8 males, OSUC 202545–202548 (AEIC); OSUC 577432, 577434–577435, 584106, 584756 (CNCI); OSUC 199608, 199610 (FSCA). **FRENCH GUIANA**: 1 female, OSUC




**Figures 188–193.** *Chromoteleia rara* sp. n., female, paratype (OSUC 557090). **188** Lateral habitus **189** Head and mesosoma, lateral view **190** Dorsal habitus **191** Head and mesosoma, dorsal view **192** Head, anterior view **193** Metasoma, dorsal view. (NOTE: large form)

47022 (OSUC). **HONDURAS**: 2 females, OSUC 369621, 413783 (MZLU). **PANAMA**: 6 females, 1 male, OSUC 586819 (CNCI); OSUC 320639 (OSUC); OSUC 221918–221920, 320644 (TAMU); OSUC 205000 (UCDC). **TRINIDAD AND TOBAGO**: 1 female, OSUC 586288 (CNCI).

**Comments.** This species is extremely variable in body length, which may be an indication that it attacks multiple species with different size eggs, or that the eggs of its host(s) vary widely in size.

***Chromoteleia robusta*** **Chen & Johnson, sp. n.**
http://zoobank.org/A38A572D-E20C-418F-8988-235126D46E8E
http://bioguid.osu.edu/xbiod_concepts/452215
Figures 12, 194–199

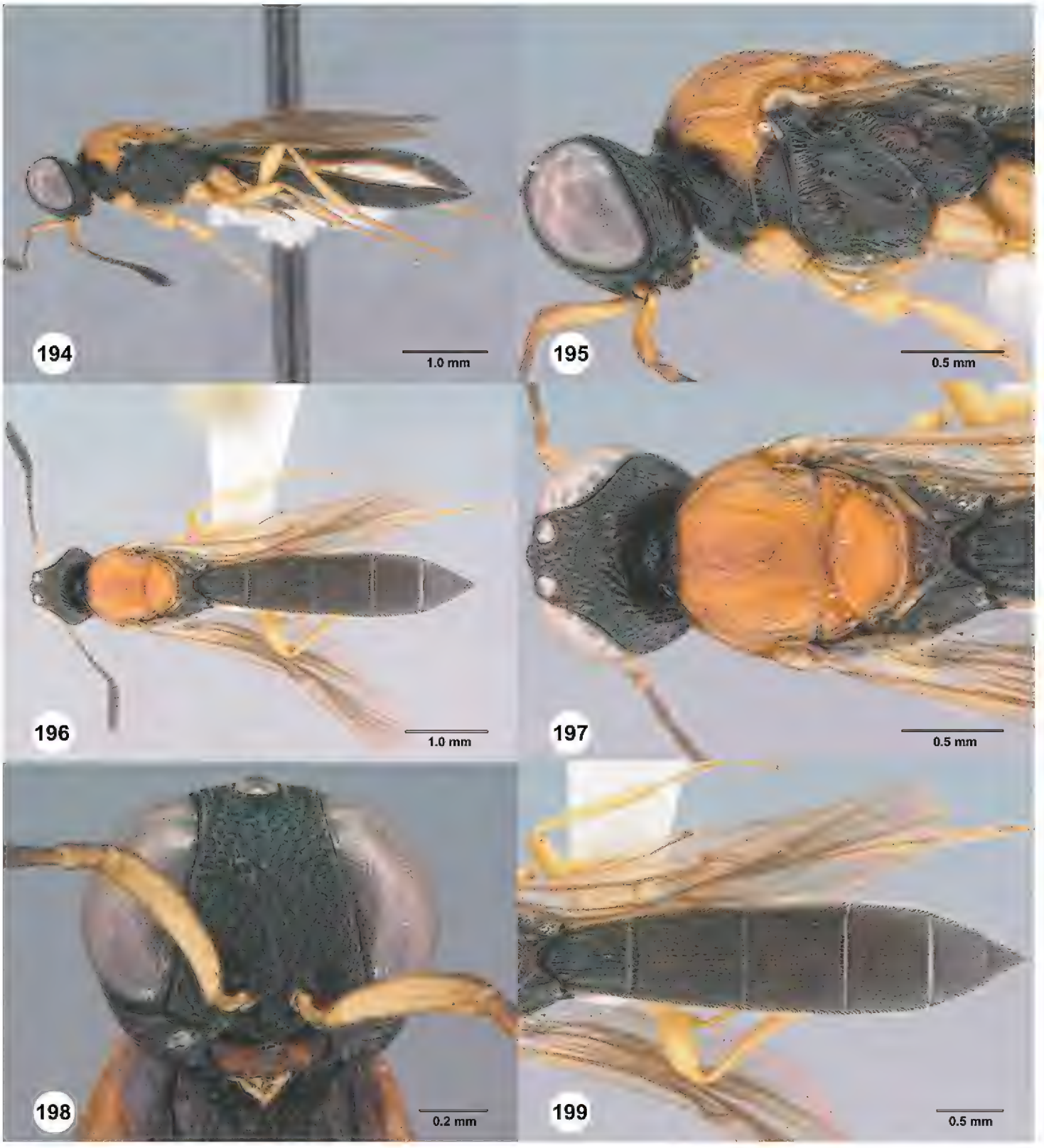
**Description.** Body length of female: 5.18–5.53 mm (n = 7). Body length of male: 4.30–4.93 mm (n = 2). Color of A1: yellow to orange. A6 in female: distinctly longer than wide. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: variably orange to black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: absent. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose; smooth. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, smooth posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: densely punctate.

Length of postmarginal vein: approximately as long as stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: absent. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide; wider than long. Shape of T6 in female in lateral view: sinuate. Apical spine on female T6: present. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

Length of postmarginal vein: approximately as long as stigmal vein.




**Figures 194–199.** *Chromoteleia robusta* sp. n., female, holotype (OSUC 577466). **194** Lateral habitus **195** Head and mesosoma, lateral view **196** Dorsal habitus **197** Head and mesosoma, dorsal view **198** Head, anterior view **199** Metasoma, dorsal view.

**Diagnosis.** This species is similar to *C. feng* in the acute apex of T6, and it can be distinguished by the combination of the following characters: female A12 with two basiconic sensilla, occipital carina interrupted medially, notaulus foveate.

**Etymology.** The epithet is inspired by the Latin word for strong or robust, in reference to the robust appearance of this species, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452215]

**Material examined.** Holotype, female: **VENEZUELA**: Aragua St., La Cumbre trail, Rancho Grande, IV.1987 – V.1987, flight intercept trap, OSUC 577466 (deposited in CNCI). *Paratypes*: **VENEZUELA**: 6 females, 2 males, OSUC 210349 (AMNH); OSUC 577462–577465, 577467–577469 (CNCI).

### *Chromoteleia rufithorax* Kieffer

http://zoobank.org/ECD55F87-65C5-4C1E-93DC-BB6974CA164A
http://bioguid.osu.edu/xbiod_concepts/4215

*Chromoteleia rufithorax* Kieffer, 1907: 266 (original description, keyed); Kieffer, 1908a: 25 (described as new); Kieffer, 1910a: 313 (keyed); Johnson, 1992: 364 (cataloged).
*Petalosema rufithorax* (Kieffer): Kieffer, 1926: 358 (generic transfer, description, keyed).

**Comments.** We were not able to locate the type specimens of this species, and its status and identity are unclear.

### *Chromoteleia semicyanea* Ashmead

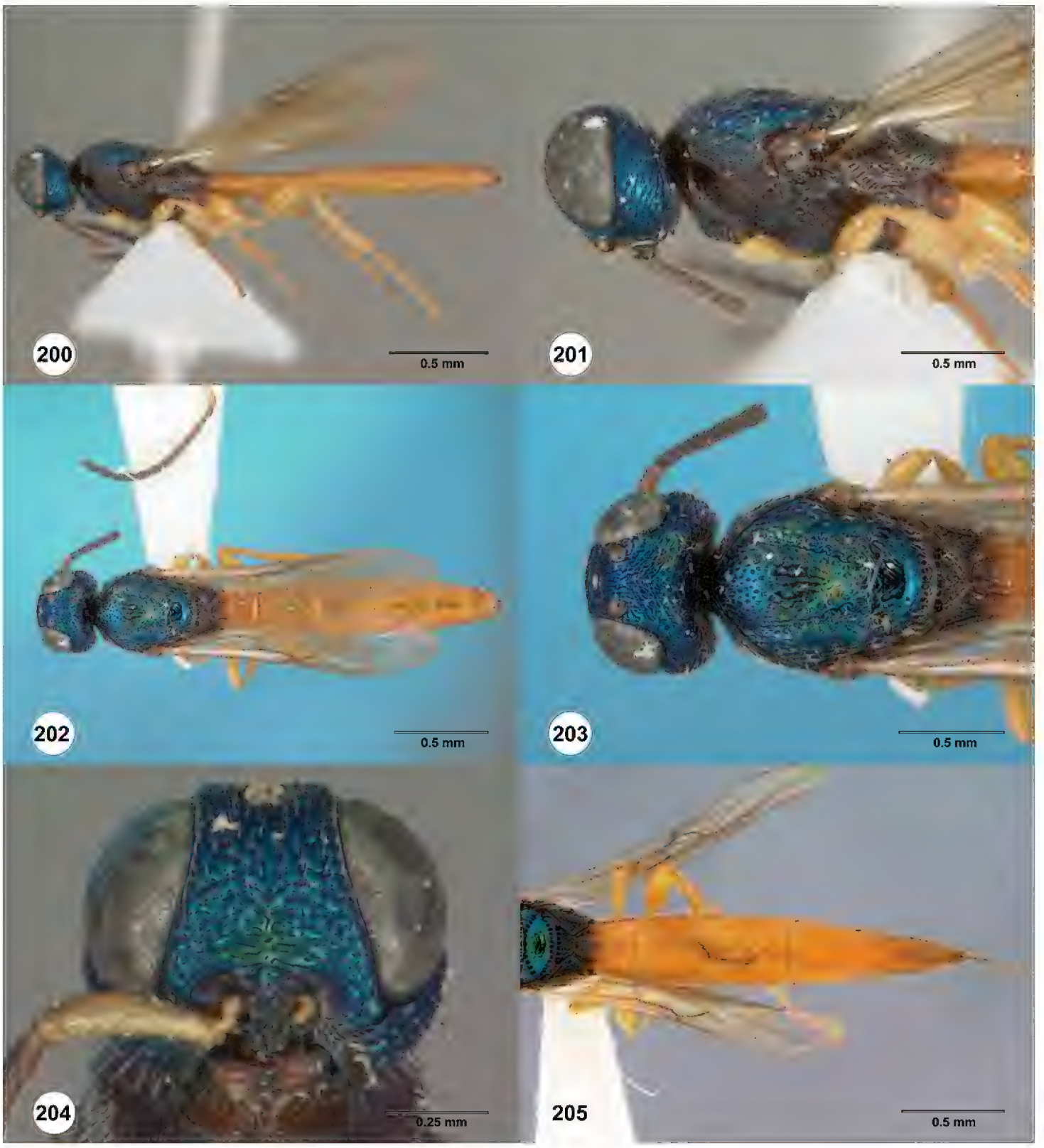
http://zoobank.org/5D560202-AF14-47AB-AB0A-70E96B8665C7
http://bioguid.osu.edu/xbiod_concepts/4216

Figures 200–205

*Chromoteleia semicyanea* Ashmead, 1893: 220 (original description); Ashmead, 1894: 224 (redescribed as new); Ashmead, 1900: 327 (distribution); Kieffer, 1907: 266 (keyed); Kieffer, 1910a: 312 (keyed); Kieffer, 1926: 406 (description); Masner, 1976: 25 (type information, lectotype designation); Johnson, 1992: 364 (cataloged, type information).

**Description.** Body length of female: 5.48–5.60 mm (n = 2). Body length of male: 4.80–4.93 mm (n = 3). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: blue. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: absent. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: blue dorsally, black laterally. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: rugose. Microsculpture of mesoscutum: coriaceous. Macrosculpture of mesoscutal midlobe: sparsely punctate. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate.




**Figures 200–205.** *Chromoteleia semicyanea* Ashmead, male, holotype (USNM Type No. 2251). **200** Lateral habitus **201** Head and mesosoma, lateral view **202** Dorsal habitus **203** Head and mesosoma, dorsal view **204** Head, anterior view **205** female (OSUC 584765) Metasoma, dorsal view.

Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: absent. Sculpture of mesepisternum below femoral depression: punctate throughout. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: ab-

sent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: distinctly longer than remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: orange. Color of metasoma in male: orange. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: smooth anteriorly, rugulose posteriorly. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely punctate to punctate rugose.

**Diagnosis.** This beautiful species can be distinguished from other *Chromoteleia* species by the following combination of characters: head and dorsal mesosoma blue, metasoma orange, frons without central keel, mesopleural carina absent.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4216]

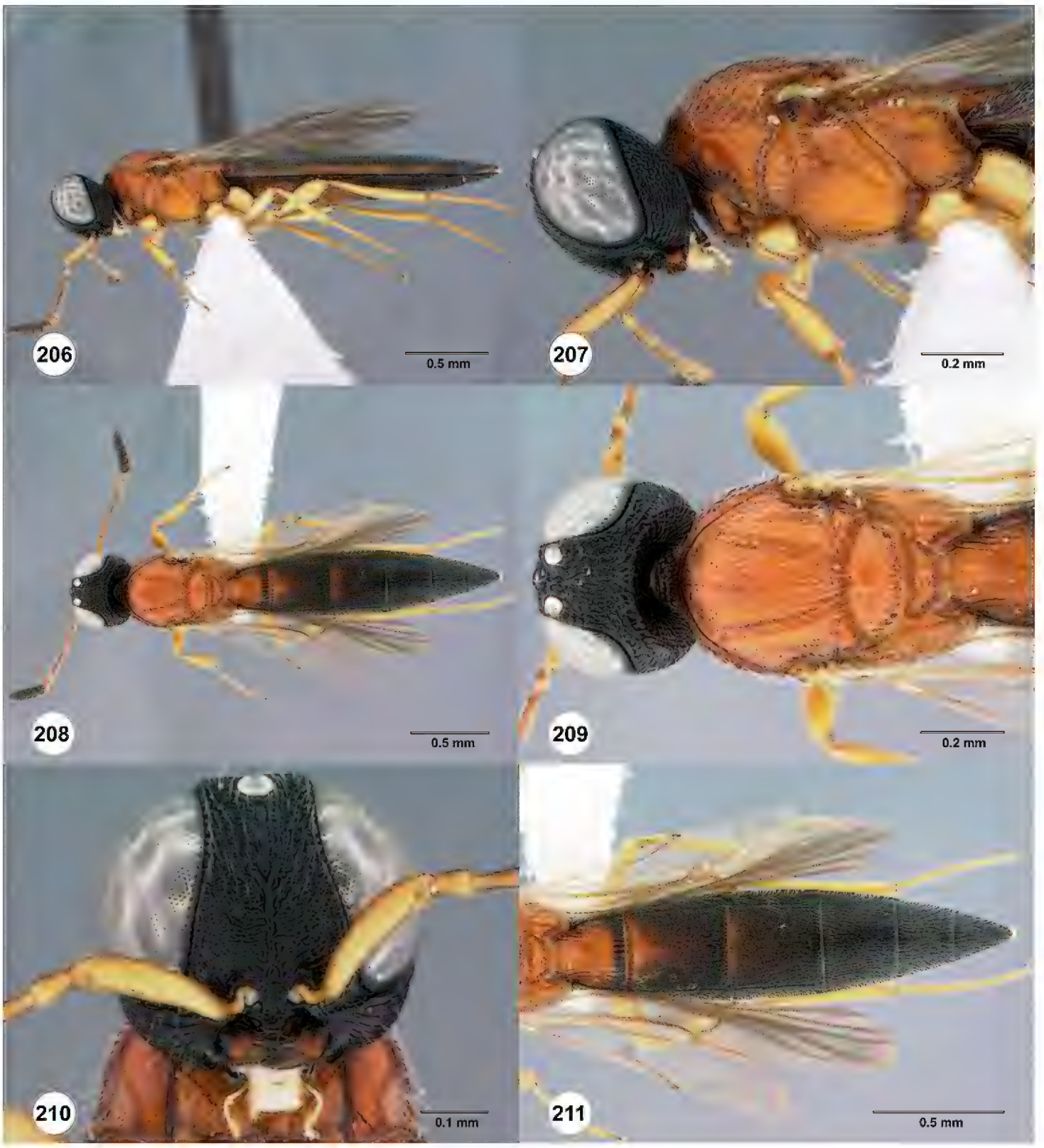
**Material examined.** Lectotype, male: **SAINT VINCENT AND THE GRENADINES**: Saint Vincent Island, 2000ft, no date, H. H. Smith, USNM Type No. 2251 (deposited in USNM). Other material: **SAINT VINCENT AND THE GRENADINES**: 2 females, 2 males, OSUC 584763–584766 (CNCI).

### *Chromoteleia semilutea* Chen & Johnson, sp. n.

http://zoobank.org/7F8871F3-3D8E-4985-9CC5-850F70A1558F
http://bioguid.osu.edu/xbiod_concepts/452219
Figures 206–211

**Description.** Body length of female: 5.28–5.50 mm (n = 10). Body length of male: 4.30–4.83 mm (n = 3). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: as long as wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: transversely striate to rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: straight. Granulate microsculpture of dorsal frons: absent. Occipital carina: interrupted medially. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth. Sculpture of gena: dorsoventrally strigose.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout.




**Figures 206–211.** *Chromoteleia semilutea* sp. n., female, holotype (OSUC 577506). **206** Lateral habitus **207** Head and mesosoma, lateral view **208** Dorsal habitus **209** Head and mesosoma, dorsal view **210** Head, anterior view **211** Metasoma, dorsal view.

Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present along full length of mesoscutum. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: smooth. Mesopleural carina: absent. Sculpture of mesepisternum below femoral depression: largely smooth, punctate rugose anteriorly and directly below femoral depression. Sculpture of dorsal metapleural area: rugose.

Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: mostly black with T1–T3 orange to dark brown. Color of metasoma in male: mostly black with T1–T3 orange to dark brow. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely punctate to punctate rugose.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* species by the following combination of characters: metasoma with T1–T3 orange to dark brown, frons with central keel complete, mesopleural carina absent.

**Etymology.** The name semilutea refers to the half orange metasoma of this species and is used as an adjective in apposition.

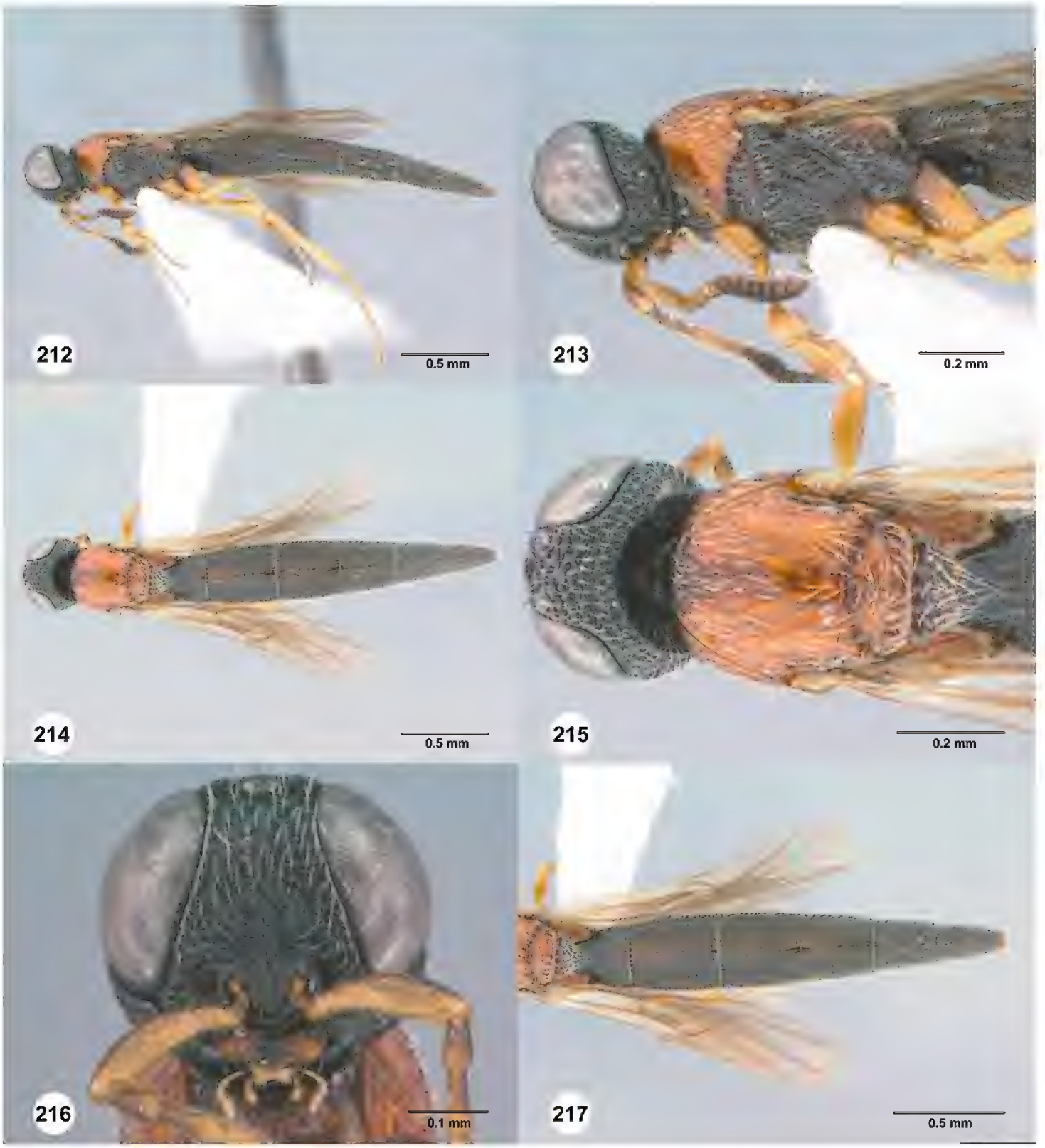
**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452219]

**Material examined.** Holotype, female: **BELIZE**: Orange Walk Dist., Rio Bravo Conservation and Management Area, 15.VII–21.VII.1996, Malaise trap, P. Kovarik, OSUC 577506 (deposited in CNCI). *Paratypes*: (9 females, 3 males) **BELIZE**: 3 females, 1 male, OSUC 577505 (CNCI); OSUC 225288, 232143, 47912 (OSUC). **MEXICO**: 6 females, 2 males, OSUC 556945–556946, 577501–577504, 586774 (CNCI); OSUC 586773 (OSUC).

### *Chromoteleia sparsa* Chen & Johnson, sp. n.

http://zoobank.org/C074AD5B-E19B-4F8F-B403-BE9B5A81AEA5
http://bioguid.osu.edu/xbiod_concepts/452213
Figures 212–217

**Description.** Body length of female: 5.38–5.70 mm (n = 20). Body length of male: 4.90–5.15mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 1. Number of basiconic sensilla on A12: 1. Sculpture of dorsal A1: punctate; smooth. Color of head: black. Sculpture of frons directly above interantennal process: areolate. Central keel: present, interrupted medially. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: absent. Occipital carina: complete. Granulate microsculpture of vertex: absent. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: punctate rugose dorsally and ventrally, strigose medially.




**Figures 212–217.** *Chromoteleia sparsa* sp. n., female, holotype (OSUC 584751). **212** Lateral habitus **213** Head and mesosoma, lateral view **214** Dorsal habitus **215** Head and mesosoma, dorsal view **216** Head, anterior view **217** Metasoma, dorsal view. (NOTE: light form)

Color of mesosoma: variably orange to nearly black. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: densely punctate. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth dorsally, rugose ventrally. Sculpture of netrion: rugose. Microsculpture of mesoscutum: absent. Macrosculpture of mesoscutal midlobe: punctate rugose anteriorly, sparsely punctate posteriorly. Macrosculpture of lateral lobe of mesoscutum: sparsely punctate. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: present anteriorly, not extending to posterior margin of mesoscutum. Mesoscutellum in lateral view: flat.

Sculpture of mesoscutellum: smooth medially, densely punctate laterally. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: absent or indistinguishable from sculpture. Sculpture of metascutellum: areolate. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate throughout. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: absent. Setation of area directly dorsal to the metapleural triangle: present. Sculpture of ventral metapleural area: rugose throughout. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly shorter than stigmal vein.

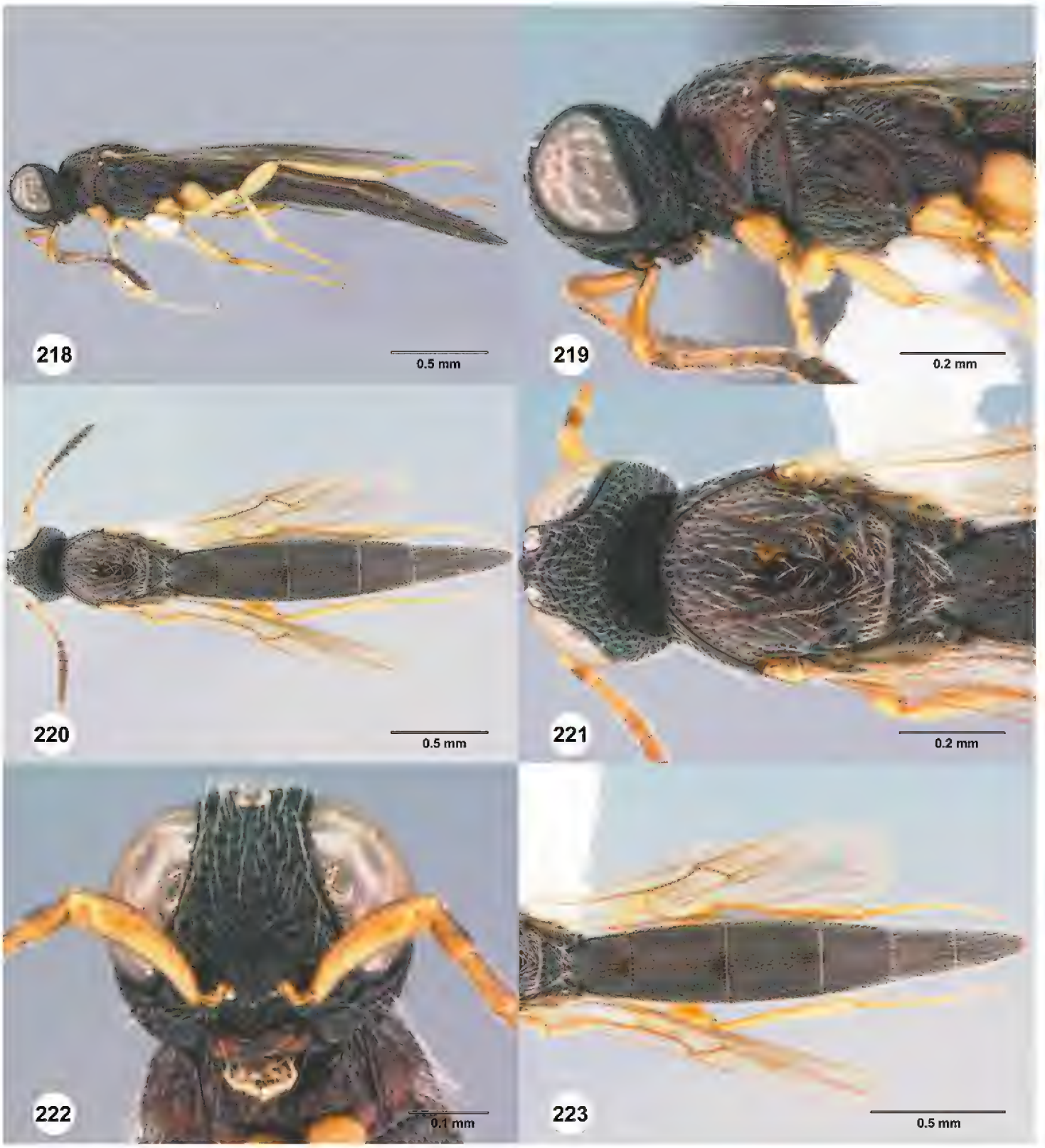
Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: sparse. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: densely longitudinally striate, with fine punctures in interstices. Length of T6 in female: at least 1.5× longer than wide. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely longitudinally striate with fine punctures in interstices. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: emarginate medially between rounded projections. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species is similar to *C. copiosa*, but it can be distinguished by the combinations of the following characters: occipital carina complete, netrion rugose, and the hind basitarsus approximately as long as the remaining segments combined.

**Etymology.** The epithet is inspired by the Latin word for scattered, in reference to the sparsely punctate posterior part of mesoscutum, and is intended to be treated as an adjective.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=452213]

**Material examined.** Holotype, female: **ECUADOR**: Sucumbíos Prov., 270 m, 00°30'S, 76°30'W, Sacha Lodge, 13.VI–23.VI.1994, Malaise trap, P. Hibbs, OSUC 584751 (deposited in CNCI). *Paratypes*: (64 females, 39 males) **ARGENTINA**: 1 female, OSUC 584143 (CNCI). **BRAZIL**: 36 females, 30 males, OSUC 149640–149641, 202482, 202504–202505, 202512, 202514, 202536 (AEIC); OSUC 557091, 583487–583489, 583493, 583499, 583502, 583504, 583509, 584149, 586149, 586259, 586343–586344, 586347–586349, 586353–586355, 586361, 586577–586581, 586586–586587, 586596, 586598, 586600, 586603–586608 (CNCI); OSUC 199635 (FSCA); OSUC 225586, 241253 (MPEG); OSUC 147541, 246558, 254870 (MZSP); OSUC 138674, 147540, 225227, 235205, 246557, 254868–254869, 354648, 583486, 583500, 586350–586351, 586585, 586590 (OSUC); OSUC 204990 (UCDC). **COLOMBIA**: 2 females, 2 males, OSUC 584302 (CNCI); OSUC 182714, 230409 (IAVH); OSUC 230410 (OSUC). **COSTA RICA**: 4 females, 1 male, OSUC 577923–577924, 586498, 586641 (CNCI); OSUC 586175 (OSUC). **ECUADOR**: 9 females, 2 males, OSUC 556944, 584748–584750, 584753–584755,




**Figures 218–223.** *Chromoteleia sparsa* sp. n., female, paratype (OSUC 583488). **218** Lateral habitus **219** Head and mesosoma, lateral view **220** Dorsal habitus **221** Head and mesosoma, dorsal view **222** Head, anterior view **223** Metasoma, dorsal view. (NOTE: dark form)

586339–586340 (CNCI); OSUC 583707, 584752 (OSUC). **FRENCH GUIANA**: 7 females, OSUC 555807, 555813, 586435, 586448, 586459 (CNCI); OSUC 555811, 586863 (OSUC). **GUYANA**: 1 female, OSUC 583434 (CNCI). **MEXICO**: 2 males, OSUC 584295 (CNCI); OSUC 221932 (TAMU). **TRINIDAD AND TOBAGO**: 1 male, OSUC 586308 (CNCI). **VENEZUELA**: 4 females, 1 male, OSUC 557088, 584141, 586362 (CNCI); OSUC 251644, 251662 (MIZA).

**Comments.** This species is extremely variable in mesosoma color and can be divided roughly into dark and light forms.

***Chromoteleia tricarinata*** **Kieffer**
http://zoobank.org/301D1A78-C6C1-4A91-8638-D3E7237C7611
http://bioguid.osu.edu/xbiod_concepts/4218
Figures 1–2, 224–236

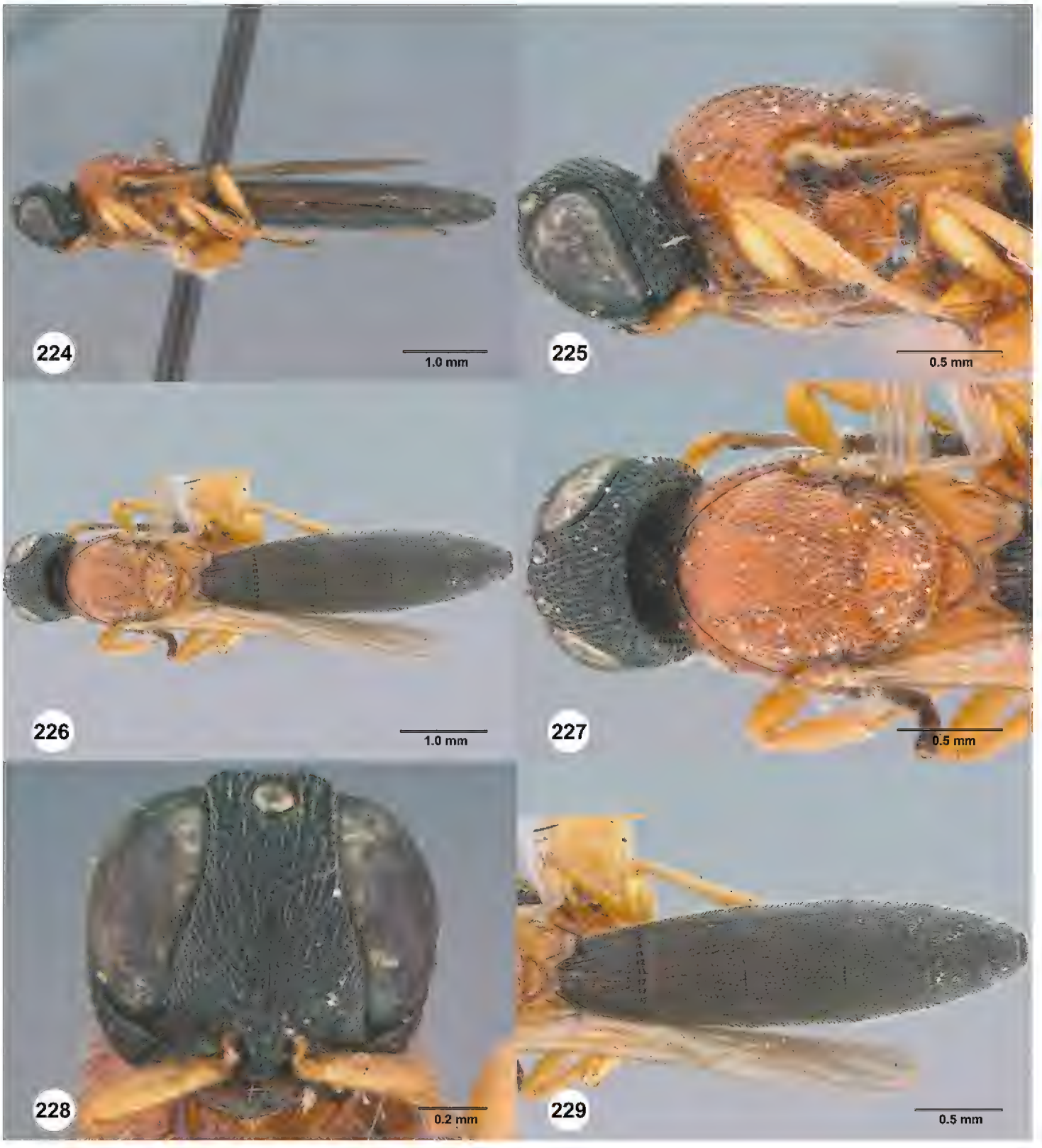
*Chromoteleia rufithorax var. tricarinata* Kieffer, 1909: 250 (original description).
*Petalosema tricarinata* (Kieffer): Kieffer, 1926: 358, 359 (generic transfer, description, change to species status, keyed).
*Chromoteleia tricarinata* Kieffer: Masner, 1976: 25 (type information, taxonomic status); Johnson, 1992: 364 (cataloged, type information).

**Description.** Body length of female: 5.28–5.90 mm (n = 20). Body length of male: 5.20–5.83 mm (n = 20). Color of A1: yellow to orange. A6 in female: as wide as long. A5 in female: distinctly longer than wide. A6 in male: approximately 2.0× longer than wide. Number of basiconic sensilla on A7: 0. Number of basiconic sensilla on A12: 2. Sculpture of dorsal A1: striate. Color of head: black. Sculpture of frons directly above interantennal process: punctate rugose. Central keel: complete, extending from interantennal process to median ocellus. Ventral margin of clypeus: pointed. Granulate microsculpture of dorsal frons: present. Occipital carina: interrupted medially. Granulate microsculpture of vertex: present. Sculpture of occiput: smooth medially, striate laterally. Sculpture of gena: coarsely punctate rugose.

Color of mesosoma: orange. Sculpture of epicoxal lobe posterior of propleural epicoxal sulcus: smooth. Sculpture of lateral pronotal area above pronotal cervical sulcus: smooth throughout. Sculpture of netrion: transversely striate. Microsculpture of mesoscutum: granulate. Macrosculpture of mesoscutal midlobe: punctate rugose throughout. Macrosculpture of lateral lobe of mesoscutum: punctate rugose. Sculpture of notaulus: foveate. Notaular foveae: interconnected. Median mesoscutal carina: absent. Mesoscutellum in lateral view: convex. Sculpture of mesoscutellum: densely punctate rugose. Shape of metascutellum: trapezoidal with broad posterior margin. Median metascutellar carina: present. Sculpture of metascutellum: rugose. Sculpture of lateral propodeal area: rugose. Mesopleural carina: present. Sculpture of mesepisternum below femoral depression: punctate rugose. Sculpture of dorsal metapleural area: rugose. Setation of dorsal metapleural area: present. Setation of area directly dorsal to the metapleural triangle: absent. Sculpture of ventral metapleural area: rugose anteriorly, obliquely striate posteriorly. Color of legs: orange yellow throughout. Length of hind basitarsus: about as long as remaining segments combined. Sculpture of hind coxa: largely smooth, with sparse fine punctures.

Length of postmarginal vein: distinctly longer than stigmal vein.

Color of metasoma in female: black. Color of metasoma in male: black. Horn on T1 in female: present. Striae of posterior margin of T1 in female: dense. Striae of T1 in male: dense. Transverse sulcus on T2: present. Sculpture of T2: densely longitudinally striate, punctate rugulose in interstices. Sculpture of T6 in female: longitudinally punctate rugose. Length of T6 in female: approximately as long as wide; wider than




**Figures 224–229.** *Chromoteleia tricarinata* Kieffer, male, holotype (CAS TYPE9759). **224** Lateral habitus **225** Head and mesosoma, lateral view **226** Dorsal habitus **227** Head and mesosoma, dorsal view **228** Head, anterior view **229** Metasoma, dorsal view.

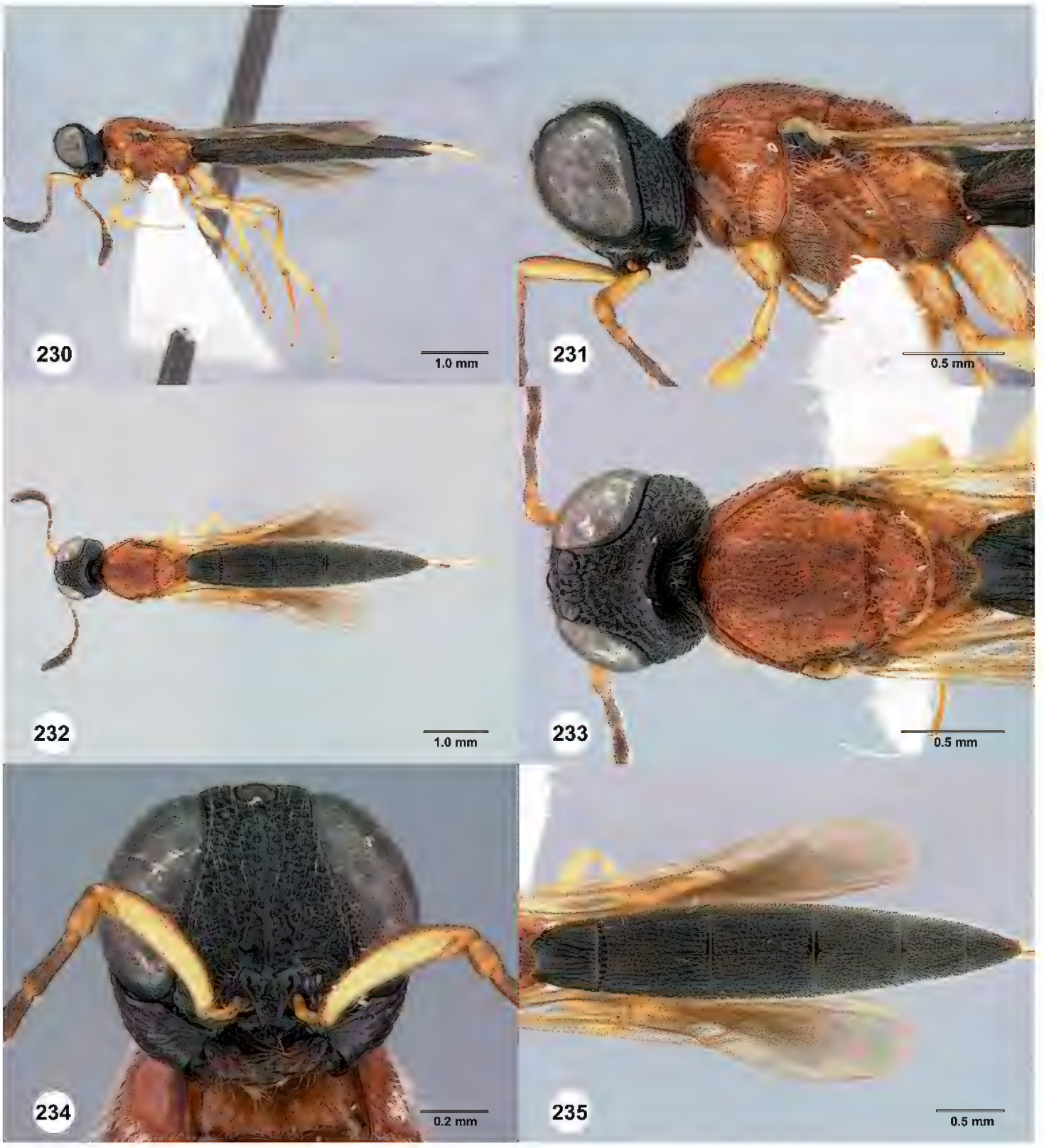
long. Shape of T6 in female in lateral view: flat. Apical spine on female T6: absent. Sculpture of T6 in male: densely punctate. Sculpture of T7 in male: granulate. Posterior margin of T7 in male: straight. Sculpture of medial S2: densely longitudinally striate with fine punctures in interstices.

**Diagnosis.** This species can be distinguished from other *Chromoteleia* by the following combination of characters: female A7 without basiconic sensillum, mesoscutum without median mesoscutal carina, dorsal metapleural area with setae, ventral metapleural area obliquely striate, male T7 with posterior margin straight.

**Link to distribution map.** [http://hol.osu.edu/map-large.html?id=4218]

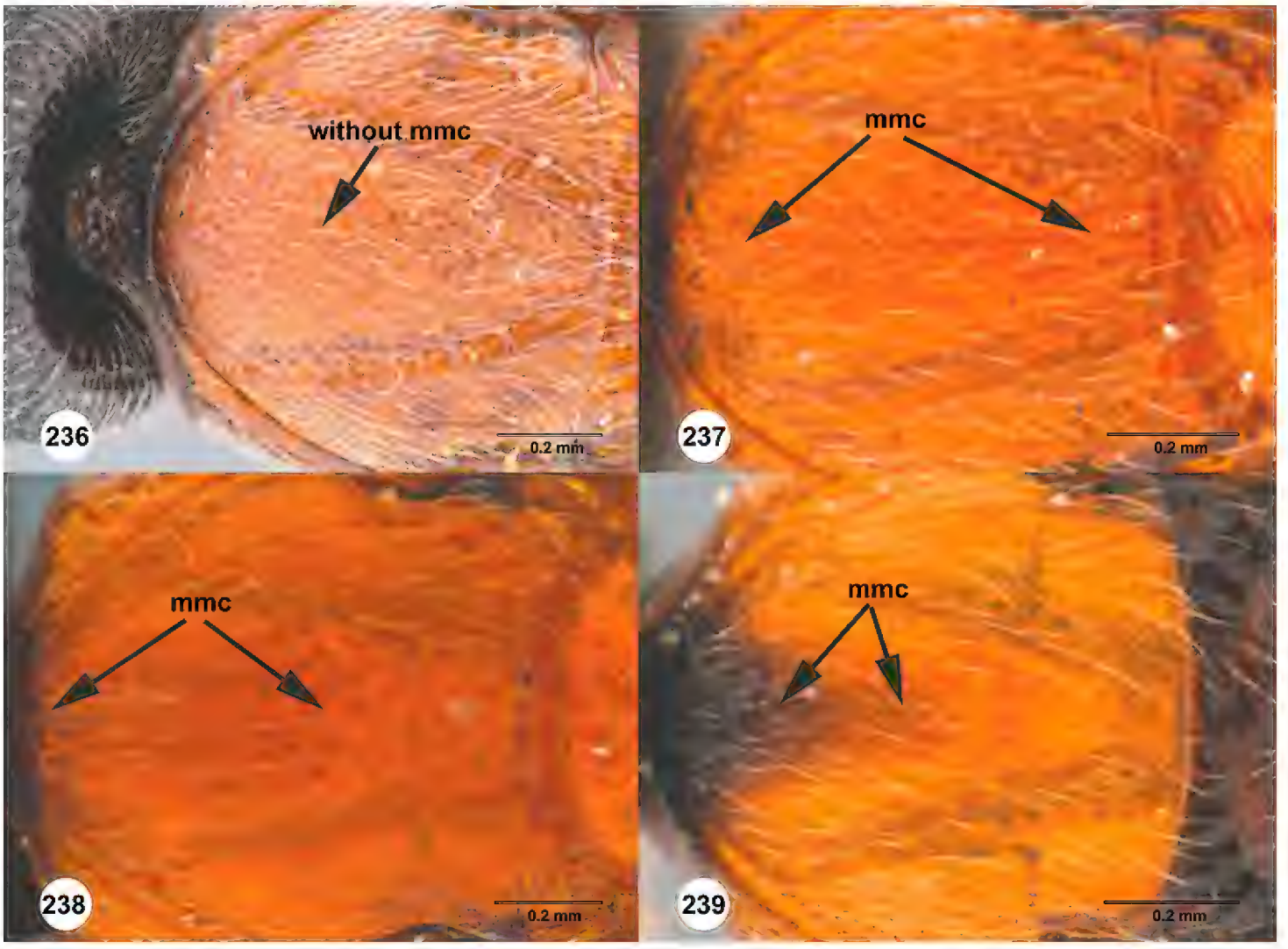
**Material examined.** *Holotype*, male, *C. rufithorax var. tricarinata*: **BELIZE**: no date, CAS TYPE9759 (deposited in CAS).

**Other material**: (330 females, 551 males) **BELIZE**: 32 females, 27 males, OSUC 556957, 584778–584798, 584800–584804, 584806, 584921, 584932–584934, 586445, 586758, 586870–586871 (CNCI); OSUC 186068, 186070, 225287, 232140–232142, 47918–47919, 47940, 48011, 48037, 64021, 64026–64028, 64046–64047, 93534, 93586–93588, 94076–94077 (OSUC). **BRAZIL**: 1 female, 2 males, OSUC 56227–56229 (OSUC). **COLOMBIA**: 1 female, OSUC 586287 (CNCI). **COSTA RICA**: 191 females, 340 males, OSUC 149653, 149657, 202538 (AEIC); OSUC 232992 (BPBM); OSUC 232058, 232120–232138, 232188, 232190–232191, 374050, 556994, 556998, 557003, 557007, 557009, 557015, 557017, 557020–557022, 557024–557029, 557046–557047, 557052, 557054–557057, 557059–557060, 557063–557080, 557082, 577894, 577897, 577900–577901, 577905, 577925, 577928, 577930–577931, 577942, 577952, 577956–577961, 577963, 577965–577970, 577972, 578010–578011, 578019, 578023–578024, 578044, 578046, 578053, 578059, 578063–578065, 578067–578070, 578072, 578074–578075, 578077–578078, 578084, 578087–578090, 578093–578096, 578098, 578100–578102, 578105, 583414, 583417–583418, 583421, 583429, 583437, 583460, 583462, 583465–583466, 583470, 583514–583515, 583518–583520, 583709–583715, 583718, 583720–583722, 583724–583730, 583732–583738, 583740–583750, 583754–583755, 583759, 583761–583762, 583766–583767, 583772, 583774–583775, 583777–583783, 583786, 583788–583793, 583795, 583797–583798, 583818–583828, 583830–583833, 583835–583849, 583851–583877, 583883–583885, 583888, 583893–583895, 583899–583900, 583902–583909, 583911–583912, 583914–583915, 583917–583924, 583929–583930, 583939, 583941–583942, 583945–583946, 583950–583951, 583977, 583979, 583983–583987, 583991, 583995–583996, 583999–584002, 584007, 584013, 584015, 584018, 584020–584022, 584024, 584029–584030, 584034, 584036, 584040, 584043–584044, 584046, 584138, 584225, 584227, 584230, 584233, 584240, 584242, 584244, 584250, 584264–584270, 584274–584276, 584281–584283, 584287, 585121–585124, 585126–585144, 586127–586128, 586139–586141, 586152–586156, 586165, 586172, 586174, 586184, 586195, 586197, 586199, 586202, 586204, 586207–586208, 586211, 586215, 586218–586221, 586262–586266, 586270, 586275–586286, 586291–586292, 586296–586301, 586374–586375, 586379–586389, 586391, 586405, 586407–586410, 586414, 586473, 586481–586484, 586486, 586488, 586490–586492, 586495–586497, 586506, 586508, 586511, 586514–586515, 586535–586537, 586540, 586560–586564, 586566, 586569–586571, 586628, 586630, 586632, 586634, 586636–586637, 586642–586643, 586647, 586650–586655, 586657, 586660–586661, 586663, 586665–586666, 586671, 586763, 586765–586768, 586779, 586835, 586872 (CNCI); DPI_FSCA 00010211 (CSCA); SM0810075, SM0810348T (KUNH); OSUC 185844, 374051–374054 (OSUC); OSUC 320638, 320648–




**Figures 230–235.** *Chromoteleia tricarinata* Kieffer, female (OSUC 584805). **230** Lateral habitus **231** Head and mesosoma, lateral view **232** Dorsal habitus **233** Head and mesosoma, dorsal view **234** Head, anterior view **235** Metasoma, dorsal view.

320650 (TAMU); OSUC 204982, 204999 (UCDC); OSUC 157812 (UCMC). **GUATEMALA**: 9 females, 16 males, OSUC 584920, 584922–584924, 584926–584931, 584935–584936, 584940–584948, 584950, 584952–584953 (CNCI); OSUC 317963 (OSUC). **HONDURAS**: 13 females, 16 males, OSUC 584961–584963 (CNCI); OSUC 369620, 369622, 369624, 369626–369627, 413758–413759, 413761–413763, 413766–413771, 413773–413782 (MZLU). **MEXICO**: 14 females, 20 males, OSUC 556947, 584937–584939, 584949, 584951, 584954–584960 (CNCI); OSUC 268812–268813, 268815–268818, 271011, 271013–271014,




**Figures 236–239.** Mesoscutum, mmc: median mesoscutal carina **236** *Chromoteleia tricarinata* Kieffer, male, holotype (CAS TYPE9759) **237** *Chromoteleia connectens* Kieffer, female, holotype (CAS TYPE9618) **238** *Chromoteleia longitarsis* Kieffer, male, holotype (CAS TYPE9682) **239** *Chromoteleia curta* sp. n., female, holotype (OSUC 185626).

271016, 56230–56233, 56235, 56237–56241, 56243 (OSUC). **NICARAGUA**: 1 female, 1 male, DPI_FSCA 00010212 (CSCA); OSUC 204951 (UCDC). **PANAMA**: 68 females, 128 males, OSUC 149652, 149655, 202542–202543, 202557, 202559, 202561–202575 (AEIC); OSUC 557099–557112, 578054, 583459, 583483, 583501, 583505–583507, 584179–584181, 584183–584224, 584337–584373, 584375–584376, 584383–584397, 586158, 586345, 586373, 586377, 586465–586468, 586477–586479, 586521–586527, 586565, 586613–586617, 586627, 586631, 586682–586692, 586815–586817, 586820–586823, 586825, 586874 (CNCI); OSUC 221922–221923, 319208–319209, 320642, 320645–320647, 321353 (TAMU). **VENEZUELA**: 1 male, OSUC 557086 (CNCI).

## Acknowledgments

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## Appendix I

URI Table matching terms and concepts used in this revision with the Hymenoptera Anatomy Ontology database.

| | | |
|---|---|---|
| | A1 | http://purl.obolibrary.org/obo/HAO_0000908 |
| | A2 | http://purl.obolibrary.org/obo/HAO_0000706 |
| | A3 | http://purl.obolibrary.org/obo/HAO_0001148 |
| | A7 | http://purl.obolibrary.org/obo/HAO_0001885 |
| | A12 | http://purl.obolibrary.org/obo/HAO_0001884 |
| | antenna | http://purl.obolibrary.org/obo/HAO_0000101 |
| | antennomere | http://purl.obolibrary.org/obo/HAO_0000107 |
| | area | http://purl.obolibrary.org/obo/HAO_0000146 |
| | body | http://purl.obolibrary.org/obo/HAO_0000182 |
| | carina | http://purl.obolibrary.org/obo/HAO_0000188 |
| | central keel | http://purl.obolibrary.org/obo/HAO_0000109 |
| cpa | cervical pronotal area | http://purl.obolibrary.org/obo/HAO_0000194 |
| | clava | http://purl.obolibrary.org/obo/HAO_0000203 |
| | clypeus | http://purl.obolibrary.org/obo/HAO_0000212 |
| | compound eye | http://purl.obolibrary.org/obo/HAO_0000217 |
| | coxa | http://purl.obolibrary.org/obo/HAO_0000228 |
| | depression | http://purl.obolibrary.org/obo/HAO_0000241 |
| dpa | dorsal pronotal area | http://purl.obolibrary.org/obo/HAO_0000267 |
| | egg | http://purl.obolibrary.org/obo/HAO_0000286 |
| | epomial carina | http://purl.obolibrary.org/obo/HAO_0000307 |
| | eye | http://purl.obolibrary.org/obo/HAO_0000217 |
| | femur | http://purl.obolibrary.org/obo/HAO_0000327 |
| | fore wing | http://purl.obolibrary.org/obo/HAO_0000351 |
| | frons | http://purl.obolibrary.org/obo/HAO_0001523 |
| | gena | http://purl.obolibrary.org/obo/HAO_0000371 |
| | head | http://purl.obolibrary.org/obo/HAO_0000397 |
| | hind coxa | http://purl.obolibrary.org/obo/HAO_0000587 |
| | hind tibia | http://purl.obolibrary.org/obo/HAO_0000631 |
| | hind wing | http://purl.obolibrary.org/obo/HAO_0000400 |
| | inner orbit | http://purl.obolibrary.org/obo/HAO_0000419 |
| | interantennal process | http://purl.obolibrary.org/obo/HAO_0000422 |
| | lateral lobe of mesoscutum | http://purl.obolibrary.org/obo/HAO_0000466 |
| | lateral ocellus | http://purl.obolibrary.org/obo/HAO_0000481 |
| LOL | lateral ocellar line | http://purl.obolibrary.org/obo/HAO_0000480 |
| lpa | lateral pronotal area | http://purl.obolibrary.org/obo/HAO_0000483 |
| | malar sulcus | http://purl.obolibrary.org/obo/HAO_0000504 |
| | mandible | http://purl.obolibrary.org/obo/HAO_0000506 |
| | margin | http://purl.obolibrary.org/obo/HAO_0000510 |
| | mesepisternum | http://purl.obolibrary.org/obo/HAO_0001872 |

| | | |
|---|---|---|
| med | mesopleural depression | http://purl.obolibrary.org/obo/HAO_0000326 |
| | mesopleuron | http://purl.obolibrary.org/obo/HAO_0000566 |
| | mesoscutellum | http://purl.obolibrary.org/obo/HAO_0000574 |
| | mesoscutum | http://purl.obolibrary.org/obo/HAO_0001490 |
| | mesosoma | http://purl.obolibrary.org/obo/HAO_0000576 |
| | metapleuron | http://purl.obolibrary.org/obo/HAO_0000621 |
| | metascutellum | http://purl.obolibrary.org/obo/HAO_0000625 |
| | metasoma | http://purl.obolibrary.org/obo/HAO_0000626 |
| | midlobe of mesoscutum | http://purl.obolibrary.org/obo/HAO_0000520 |
| | netrion | http://purl.obolibrary.org/obo/HAO_0000644 |
| | notauli (notaulus) | http://purl.obolibrary.org/obo/HAO_0000647 |
| | occipital carina | http://purl.obolibrary.org/obo/HAO_0000653 |
| | ocellus | http://purl.obolibrary.org/obo/HAO_0000661 |
| ot | ocellar triangle | http://purl.obolibrary.org/obo/HAO_0000430 |
| OOL | ocular ocellar line | http://purl.obolibrary.org/obo/HAO_0000662 |
| | orbit | http://purl.obolibrary.org/obo/HAO_0000672 |
| POL | posterior ocellar line | http://purl.obolibrary.org/obo/HAO_0000759 |
| | process | http://purl.obolibrary.org/obo/HAO_0000822 |
| | propodeum | http://purl.obolibrary.org/obo/HAO_0001248 |
| | S1 | http://purl.obolibrary.org/obo/HAO_0001997 |
| | S2 | http://purl.obolibrary.org/obo/HAO_0001829 |
| | S3 | http://purl.obolibrary.org/obo/HAO_0001831 |
| | S4 | http://purl.obolibrary.org/obo/HAO_0001832 |
| | S5 | http://purl.obolibrary.org/obo/HAO_0001833 |
| | S6 | http://purl.obolibrary.org/obo/HAO_0001834 |
| | S7 | http://purl.obolibrary.org/obo/HAO_0002185 |
| | sculpture | http://purl.obolibrary.org/obo/HAO_0000913 |
| | sternite | http://purl.obolibrary.org/obo/HAO_0001654 |
| | sulcus | http://purl.obolibrary.org/obo/HAO_0000978 |
| | T1 | http://purl.obolibrary.org/obo/HAO_0000053 |
| | T2 | http://purl.obolibrary.org/obo/HAO_0000056 |
| | T3 | http://purl.obolibrary.org/obo/HAO_0000057 |
| | T4 | http://purl.obolibrary.org/obo/HAO_0000058 |
| | T5 | http://purl.obolibrary.org/obo/HAO_0000059 |
| | T6 | http://purl.obolibrary.org/obo/HAO_0000060 |
| | T7 | http://purl.obolibrary.org/obo/HAO_0000061 |
| | tergite | http://purl.obolibrary.org/obo/HAO_0001783 |
| | tibia | http://purl.obolibrary.org/obo/HAO_0001017 |
| | tyloid | http://purl.obolibrary.org/obo/HAO_0001199 |
| | vein | http://purl.obolibrary.org/obo/HAO_0001095 |
| | vertex | http://purl.obolibrary.org/obo/HAO_0001077 |
| | vertical epomial carina | http://purl.obolibrary.org/obo/HAO_0000307 |
| | wing | http://purl.obolibrary.org/obo/HAO_0001089 |